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ANALOG TO DIGITAL CONVERSION OF ELECTROENCEPHOLOGRAPHIC DATA.(U)
OCT 79 DAAK70-79-M-4337

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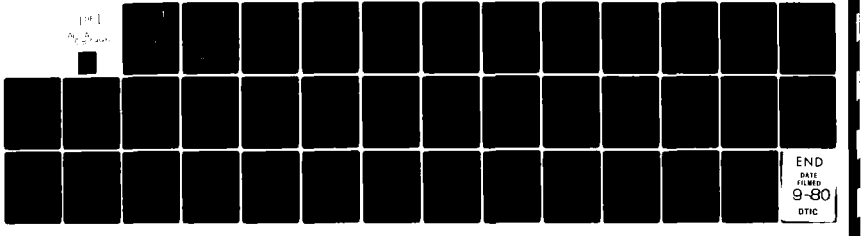

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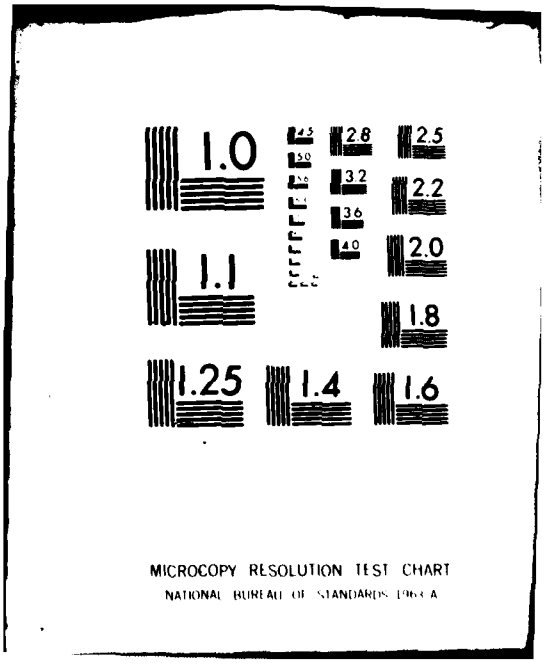
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Springfield VA
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Contract No. DAAK70-79-M-4337

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SIGNAL ANALYSIS SYSTEMS DIVISION

31 October 1979

Reference: Contract DAAK70-79-M-4337

Subject: Final Report on Analog to Digital Conversion of Electroencepholograhic Data

Gentlemen:

This report encompasses the progress made on contract DAAK70-79-M-4337 that commenced 1 August 1979. Services that were to be provided were primarily a level of effort in the analog to digital conversion of 5 Electroencepholograhic signal data tapes. We've successfully completed all five tapes, without any major difficulties.

Deliverables were to include the digitized data on 9-track 1/2" magnetic tapes compatible with peripheral equipment located at the MERADCOM computer facility.

After some careful thought the approach taken in digitizing the analog data was to divide the process into four tasks. These tasks are outlined below.

TASK I objectives were to:

1. Rent a recorder capable of reproducing the Electrocencepholograhic Data. This recorder needed to be outfitted with necessary FM IRIG Low Band, and Direct reproduction electronics, and setup to reproduce the data at a speed of 1 7/8 ips.

2. Purchase a quantity of 10, 1/2" magnetic tapes, allowing a duplicate backup set of digital data tapes to be generated.

TASK II objectives were to:

1. Determine the digitizing specifications to be used for the electroencepholograhic data. This step involved the close scrutinization of the analog data with a spectrum analyzer. The analyzer was used in an attempt to determine where most of the

signal power resided in the frequency spectrum over a span of DC to 300Hz. A determination was made that the majority of pertinent information was down below 100Hz, but there was information of possible interest out as far as 200Hz and maybe even 300Hz if sought for vigorously. Therefore initially a small group of events was digitized with the following parameters low pass filter frequency cutoff equal to 300Hz, with a data sample rate of 1024Hz or 1024 points per second, at 1600 BPI.

Upon completion of digitizing this small group of events, it was determined that the next logical step to take would be a magnetic tape dump. This was followed by a times series plot of the data and a power spectrum plot, to verify with a computer, what was observed on the spectrum analyzer. The computer generated times series, and power spectrum plots, truly indicated that the digitization process needed to be altered. The next set was to redo the same events with these new parameters. Low pass filter frequency cutoff, equal to 200Hz, and the sampling rate was dropped to 512Hz, or 512 points per second, at 1600 BPI. These parameters turned out to be ideal for data resolution, and cut in half the amount of digital tape to be used for each analog tape.

2. The next step under this task was to verify that data did exist on the analog tapes. We found it absolutely necessary to redo the log sheets provided with the analog tapes. The decision to redo the log sheets, was made after it was determined, that the time codes supplied for each event with each tape was not at all accurate. This was found to be the case in 90% of the 818 events. The occurrence of the event marker had to be known, and exact to withnin 1 second. Our objective was to record data in a 10-12 second window, with 5-6 seconds on either side of the event marker. It was found that in some cases time codes logged for event markers was off by as much as 10 seconds and more. It was also discovered that some logged events were never triggered with event markers on the analog tapes. This also proved to be a good reason to check each of the 818 events to be assured of it's identification within the log, and most important, its occurrence.

TASK III objectives were to:

1. Perform mass digitization process, in an effort to complete as many of the 5 analog tapes as possible with funds allocated primarily for this purpose in the contract budget.

Generated deliverables in the form of 5 magnetic digital tapes recorded at 1600BPI on a 9 track drive. Supplied below is information pertaining to digital tape size. Also provided is sufficient documentation to locate and identify specific events on the data tapes. These events will now also be referred to as files.

ANALOG IDENTIFICATION	NUMBER OF FILES ON DIGITAL TAPE
Tape 2A	150 Files
Tape 3A	156 Files
Tape 4A	160 Files
Tape 5A	180 Files
Tape 6A	172 Files

Note: First record on file of digital tape 5A is bad. This record has to be skipped to proceed with any processing of electroencepholograhic data.

TAPE # 2A

DIGITAL INFORMATION							ANALOG INFORMATION				
File #	# of Rec.	CONTENTS IN CHANNEL 1	2	3	4	5	TIME CODE START	MAKER	Rec Ses	Rat. #	Data
1	31	TNT	Neutral	EEG-P	EEG-C	--	00:14:00	----	BASELINE		
2	11	TNT	Neutral	EEG-P	EEG-C	--	00:19:53	00:19:58	2-1	A	T
3	11	TNT	Neutral	EEG-P	EEG-C	--	00:20:22	00:20:27	2-1	A	N
4	11	TNT	Neutral	EEG-P	EEG-C	--	00:20:59	00:21:04	2-1	A	T
5	11	TNT	Neutral	EEG-P	EEG-C	--	00:21:25	00:21:30	2-1	A	N
6	11	TNT	Neutral	EEG-P	EEG-C	--	00:21:47	00:21:52	2-1	A	T
7	11	TNT	Neutral	EEG-P	EEG-C	--	00:23:18	00:23:23	2-2	A	T
8	11	TNT	Neutral	EEG=P	EEG-C	--	00:23:43	00:23:48	2-2	A	N
9	11	TNT	Neutral	EEG-P	EEG-C	--	00:24:02	00:24:07	2-2	A	N
10	11	TNT	Neutral	EEG-P	EEG-C	--	00:24:29	00:24:34	2-2	A	T
11	11	TNT	Neutral	EEG-P	EEG-C	--	00:25:05	00:25:10	2-2	A	T
12	11	TNT	Neutral	EEG-P	EEG-C	--	00:26:41	00:26:46	2-3	A	T
13	11	TNT	Neutral	EEG-P	EEG-C	--	00:27:03	00:27:08	2-3	A	N
14	11	TNT	Neutral	EEG-P	EEG-C	--	00:27:42	00:27:47	2-3	A	T
15	11	TNT	Neutral	EEG-P	EEG-C	--	00:28:16	00:28:21	2-3	A	N
16	11	TNT	Neutral	EEG-P	EEG-C	--	00:28:48	00:28:53	2-3	A	T
17	11	TNT	Neutral	EEG-P	EEG-C	--	00:30:20	00:30:25	2-4	A	T
18	11	TNT	Neutral	EEG-P	EEG-C	--	00:30:48	00:30:53	2-4	A	N
19	11	TNT	Neutral	EEG-P	EEG-C	--	00:31:34	00:31:39	2-4	A	T
20	11	TNT	Neutral	EEG-P	EEG-C	--	00:31:59	00:32:04	2-4	A	N
21	11	TNT	Neutral	EEG-P	EEG-C	--	00:31:29	00:33:34	2-5	A	T
22	11	TNT	Neutral	EEG-P	EEG-C	--	00:33:56	00:34:01	2-5	A	N
23	11	TNT	Neutral	EEG-P	EEG-C	--	00:34:21	00:34:26	2-5	A	N
24	11	TNT	Neutral	EEG-P	EEG-C	--	00:34:40	00:34:45	2-5	A	T
25	11	TNT	Neutral	EEGPC	EEG-O-C	--	00:58:07	00:58:12	3-1	A	T
26	11	TNT	Neutral	EEGPC	EEG-O-C	--	00:58:30	00:58:35	3-1	A	N
27	11	TNT	Neutral	EEGPC	EEG-O-C	--	00:58:51	00:58:36	3-1	A	N
28	11	TNT	Neutral	EEGPC	EEG-O-C	--	00:59:12	00:59:17	3-1	A	N
29	11	TNT	Neutral	EEGPC	EEG-O-C	--	00:59:34	00:59:39	3-1	A	T
30	11	TNT	Neutral	EEGPC	EEG-O-C	--	1:01:15	1:01:20	3-2	A	T

TAPE # 2A

File #	# of Rec.	DIGITAL INFORMATION: CONTENTS IN CHANNEL 1	2	3	4	5	ANALOG INFORMATION: TIME CODE START	MAKER	Rec Ses	Rat. #	Da
31	11	TNT	Neutral	EEGP-C	EEGO-C	--	1:01:40	1:01:45	3-2	A	N
32	11	TNT	Neutral	EEGP-C	EEGOC	--	1:01:59	1:02:04	3-2	A	N
33	11	TNT	Neutral	EEGP-C	EEGOC	--	1:02:17	1:02:22	3-2	A	T
34	11	TNT	Neutral	EEGP-C	EEGOC	--	1:02:42	1:02:47	3-2	A	N
35	11	TNT	Neutral	EEGP-C	EEGOC	--	1:03:43	1:03:48	3-3	A	T
36	11	TNT	Neutral	EEGP-C	EEGOC	--	1:04:05	1:04:10	3-3	A	N
37	11	TNT	Neutral	EEGP-C	EEGOC	--	1:04:46	1:04:51	3-3	A	T
38	11	TNT	Neutral	EEGP-C	EEGOC	--	1:05:05	1:05:10	3-3	A	T
39	11	TNT	Neutral	EEGP-C	EEGOC	--	1:05:25	1:05:30	3-3	A	N
40	11	TNT	Neutral	EEGP-C	EEGOC	--	1:07:21	1:07:26	3-4	A	T
41	11	TNT	Neutral	EEGP-C	EEGOC	--	1:07:41	1:07:46	3-4	A	N
42	11	TNT	Neutral	EEGP-C	EEGOC	--	1:07:56	1:08:01	3-4	A	N
43	11	TNT	Neutral	EEGP-C	EEGOC	--	1:08:13	1:08:18	3-4	A	N
44	11	TNT	Neutral	EEGP-C	EEGOC	--	1:08:25	1:08:30	3-4	A	T
45	11	TNT	Neutral	EEGP-C	EEGOC	--	1:09:35	1:09:40	3-5	A	T
46	11	TNT	Neutral	EEGP-C	EEGOC	--	1:09:50	1:09:55	3-5	A	T
47	11	TNT	Neutral	EEGP-C	EEGOC	--	1:10:18	1:10:23	3-5	A	N
48	11	TNT	Neutral	EEGP-C	EEGOC	--	1:10:39	1:10:44	3-5	A	N
49	11	TNT	Neutral	EEGP-C	EEGOC	--	1:10:52	1:10:57	3-5	A	T
50	11	TNT	Neutral	EEGP	EEGO	--	1:33:58	1:34:03	5-1	B	N
51	11	TNT	Neutral	EEGP	EEGO	--	1:34:23	1:34:28	5-1	B	N
52	11	TNT	Neutral	EEGP	EEGO	--	1:34:47	1:34:52	5-1	B	T
53	11	TNT	Neutral	EEGP	EEGO	--	1:35:16	1:35:21	5-1	B	N
54	11	TNT	Neutral	EEGP	EEGO	--	1:35:51	1:35:56	5-1	B	T
55	11	TNT	Neutral	EEGP	EEGO	--	1:36:20	1:36:25	5-1	B	T
56	11	TNT	Neutral	EEGP	EEGO	--	1:39:35	1:39:40	5-2	B	T
57	11	TNT	Neutral	EEGP	EEGO	--	1:40:01	1:40:06	5-2	B	T
58	11	TNT	Neutral	EEGP	EEGO	--	1:40:20	1:40:25	5-2	B	N
59	11	TNT	Neutral	EEGP	EEGO	--	1:40:40	1:40:45	5-2	B	T
60	11	TNT	Neutral	EEGP	EEGO	--	1:42:48	1:42:53	5-3	B	N

TAPE # 2A

DIGITAL INFORMATION							ANALOG INFORMATION				
File #	# of Rec.	CONTENTS IN-CHANNEL 1	2	3	4	5	TIME CODE START	MAKER	Rec Ses	Rat. #	
61	11	TNT	Neutral	EEG P	EEG C	--	1:43:15	1:43:20	5-3	B	T
62	11	TNT	Neutral	EEG P	EEG C	--	1:43:37	1:43:42	5-3	B	T
63	11	TNT	Neutral	EEG P	EEG C	--	1:44:00	1:44:05	5-3	B	N
64	11	TNT	Neutral	EEG P	EEG C	--	1:46:31	1:46:36	5-4	B	T
65	11	TNT	Neutral	EEG P	EEG C	--	1:47:28	1:47:33	5-4	B	N
66	11	TNT	Neutral	EEG P	EEG C	--	1:47:54	1:47:59	5-4	B	T
67	11	TNT	Neutral	EEG P	EEG C	--	1:48:14	1:48:19	5-4	B	N
68	11	TNT	Neutral	EEG P	EEG C	--	1:49:31	1:49:36	5-5	B	N
69	11	TNT	Neutral	EEG P	EEG C	--	1:50:01	1:50:06	5-5	B	T
70	11	TNT	Neutral	EEG P	EEG C	--	1:50:24	1:50:29	5-5	B	T
71	11	TNT	Neutral	EEG P	EEG C	--	1:50:53	1:50:58	5-5	B	N
72	11	TNT	Neutral	EEG P	EEG C	--	1:51:22	1:51:27	5-5	B	T
73	11	TNT	Neutral	EEG P	EEG C	--	1:53:04	1:53:07	5-6	B	T
74	11	TNT	Neutral	EEG P	EEG C	--	1:53:27	1:53:32	5-6	B	N
75	11	TNT	Neutral	EEG P	EEG C	--	1:53:49	1:53:54	5-6	B	N
76	11	TNT	Neutral	EEG P	EEG C	--	1:54:21	1:54:26	5-6	B	T
77	11	TNT	Neutral	EEG P	EEG C	--	1:54:44	1:54:49	5-6	B	N
78	11	TNT	Neutral	EEG PC	EEGOC	--	2:16:03	2:16:08	6-1	B.	T
79	11	TNT	Neutral	EEG PC	EEGOC	--	2:16:22	2:16:27	6-1	B	T
80	11	TNT	Neutral	EEG PC	EEGOC	--	2:16:44	2:16:49	6-1	B	N
81	11	TNT	Neutral	EEG PC	EEGOC	--	2:17:05	2:17:10	6-1	B	N
82	11	TNT	Neutral	EEG PC	EEGOC	--	2:17:23	2:17:28	6-1	B	T
83	11	TNT	Neutral	EEG PC	EEGOC	--	2:18;23	2:18:28	6-2	B	N
84	11	TNT	Neutral	EEG PC	EEGOC	--	2:18:40	2:18:45	6-2	B	T
85	11	TNT	Neutral	EEG PC	EEGOC	--	2:18:58	2:19:03	6-2	B	T
86	11	TNT	Neutral	EEG PC	EEGOC	--	2:19:19	2:19:24	6-2	B	N
87	11	TNT	Neutral	EEG PC	EEGOC	--	2:19:43	2:19:48	6-2	B	T
88	11	TNT	Neutral	EEG PC	EEGOC	--	2:21:40	2:21:45	6-3	B	N
89	11	TNT	Neutral	EEG PC	EEGOC	--	2:22:08	2:22:13	6-3	B	T
90	11	TNT	Neutral	EEG PC	EEGOC	--	2:22:50	2:22:55	6-3	B	T

TAPE # 2A

File #	# of Rec.	DIGITAL INFORMATION: CONTENTS IN-CHANNEL 1	2	3	4	5	ANALOG INFORMATION: TIME CODE START	MAKER	Rec Ses	Rat. #	Da
91	11	TNT	Neutral	EEGP-C	EEGOC	-- --	2:23:11	2:23:16	6-3	B	N
92	11	TNT	Neutral	EEGP-C	EEGOC	---	2:23:30	2:23:35	6-3	B	T
93	11	TNT	Neutral	EEGP-C	EEGOC	---	2:24:42	2:24:47	6-4	B	T
94	11	TNT	Neutral	EEGP-C	EEGOC	---	2:24:59	2:25:04	6-4	B	T
95	11	TNT	Neutral	EEGP-C	EEGOC	---	2:25:21	2:25:26	6-4	B	N
96	11	TNT	Neutral	EEGP-C	EEGOC	---	2:25:50	2:25:55	6-4	B	N
97	11	TNT	Neutral	EEGP-C	EEGOC	---	2:26:06	2:26:11	6-4	B	T
98	11	TNT	Neutral	EEGP-C	EEGOC	---	2:27:17	2:27:22	6-5	B	T
99	11	TNT	Neutral	EEGP-C	EEGOC	---	2:27:36	2:27:41	6-5	B	T
100	11	TNT	Neutral	EEGP-C	EEGOC	---	2:28:03	2:28:08	6-5	B	N
101	11	TNT	Neutral	EEGP-C	EEGOC	---	2:28;25	2:28:30	6-5	B	T
102	11	TNT	Neutral	EEGP-C	EEGOC	---	2:28:45	2:28:50	6-5	B	N
103	11	TNT	Neutral	EEGP-C	EEGOC	---	2:58:21	2:58:26	4-1	A	N
104	11	TNT	Neutral	EEGP-C	EEGOC	---	2:58:37	2:58:42	4-1	A	T
105	11	TNT	Neutral	EEGP-C	EEGOC	---	2:58:53	2:58:58	4-1	A	T
106	11	TNT	Neutral	EEGP-C	EEGOC	---	2:59:20	2:59:25	4-1	A	N
107	11	TNT	Neutral	EEGP-C	EEGOC	---	2:59:32	2:59:37	4-1	A	N
108	11	TNT	Neutral	EEGP-C	EEGOC	---	2:59:48	2:59:53	4-1	A	T
109	11	TNT	Neutral	EEGP-C	EEGOC	---	3:00:47	3:00:52	4-2	A	T
110	11	TNT	Neutral	EEGP-C	EEGOC	---	3:01:04	3:01:09	4-2	A	N
111	11	TNT	Neutral	EEGP-C	EEGOC	---	3:01:30	3:01:35	4-2	A	N
112	11	TNT	Neutral	EEGP-C	EEGOC	---	3:01:52	3:01:57	4-2	A	T
113	11	TNT	Neutral	EEGP-C	EEGOC	---	3:02:09	3:02:14	4-2	A	T
114	11	TNT	Neutral	EEGP-C	EEGOC	---	3:03:37	3:03:42	4-3	A	N
115	11	TNT	Neutral	EEGP-C	EEGOC	---	3:03:57	3:04:02	4-3	A	T
116	11	TNT	Neutral	EEGP-C	EEGOC	---	3:04:18	3:04:23	4-3	A	T
117	11	TNT	Neutral	EEGP-C	EEGOC	---	3:04:36	3:04:41	4-3	A	N
118	11	TNT	Neutral	EEGP-C	EEGOC	---	3:05:00	3:05:05	4-3	A	T
119	11	TNT	Neutral	EEGP-C	EEGOC	---	3:05:16	3:05:21	4-3	A	N
120	11	TNT	Neutral	EEGP-C	EEGOC	---	3:06:20	3:06:25	4-4	A	T

TAPE # 2A

DIGITAL INFORMATION							ANALOG INFORMATION				
File #	# of Rec.	CONTENTS IN CHANNEL 1	2	3	4	5	TIME CODE START	MAKER	Rec Ses	Rat. #	
121	11	TNT	Neutral	EEG-C	EEG-P	--	3:06:32	3:06:37	4-4	A	T
122	11	TNT	Neutral	EEG-C	EEG-P	--	3:06:58	3:07:03	4-4	A	N
123	11	TNT	Neutral	EEG-C	EEG-P	--	3:07:14	3:07:19	4-4	A	N
124	11	TNT	Neutral	EEG-C	EEG-P	--	3:07:36	3:07:41	4-4	A	N
125	11	TNT	Neutral	EEG-C	EEG-P	--	3:07:51	3:07:56	4-4	A	T
126	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:29:08	3:29:13	5-1	A	T
127	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:29:31	3:29:36	5-1	A	N
128	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:29:52	3:29:57	5-1	A	N
129	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:30:10	3:30:15	5-1	A	T
130	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:30:33	3:30:38	5-1	A	T
131	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:32:07	3:32:12	5-2	A	T
132	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:32:26	3:12:31	5-2	A	T
133	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:32:47	3:32:52	5-2	A	N
134	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:33:04	3:33:09	5-2	A	T
135	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:33:29	3:33:34	5-2	A	T
136	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:52:12	3:35:17	5-3	A	N
137	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:36:00	3:36:05	5-3	A	T
138	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:36:26	3:36:31	5-3	A	T
139	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:36:54	3:36:59	5-3	A	N
140	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:37:31	3:37:36	5-3	A	N
141	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:39:18	3:39:23	5-4	A	T
142	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:39:42	3:39:47	5-4	A	T
143	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:40:06	3:40:11	5-4	A	N
144	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:40:29	3:40:34	5-4	A	T
145	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:41:17	3:41:22	5-4	A	N
146	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:42:45	3:42:47	5-5	A	N
147	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:42:58	3:43:03	5-5	A	N
148	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:43:21	3:43:26	5-5	A	T
149	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:43:40	3:43:45	5-5	A	T
150	11	TNT	Neutral	EEG P-C	EEGO-C	--	3:44:03	3:44:08	5-5	A	N

TAPE # 3A

File #	# of Rec.	DIGITAL INFORMATION: CONTENTS IN CHANNEL 1	2	3	4	5	ANALOG INFORMATION: TIME CODE START	MAKER	Rec Ses	Rat. #	D.
1	11	TNT	Neutral	EEG OP	EEGP-C	EEG CO	00:24:30	----	Baseline		
2	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:29:11	00:29:16	6-1	A	T
3	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:29:38	00:29:43	6-1	A	T
4	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:30:02	00:30:07	6-1	A	N
5	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:30:29	00:30:34	6-1	A	N
6	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:30:49	00:30:54	6-1	A	T
7	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:31:16	00:31:21	6-1	A	N
8	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:33:06	00:33:11	6-2	A	N
9	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:33:46	00:33:51	6-2	A	T
10	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:34:11	00:34:16	6-2	A	T
11	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:34:49	00:34:54	6-2	A	N
12	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:35:14	00:35:19	6-2	A	T
13	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:35:45	00:35:49	6-2	A	N
14	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:37:04	00:37:09	6-3	A	T
15	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:37:41	00:37:46	6-3	A	T
16	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:38:13	00:38:18	6-3	A	N
17	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:38:38	00:38:43	6-3	A	T
18	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:39:07	00:39:12	6-3	A	N
19	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:39:24	00:39:29	6-3	A	N
20	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:41:38	00:41:43	6-4	A	N
21	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:42:01	00:42:06	6-4	A	T
22	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:42:21	00:42:26	6-4	A	T
23	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:42:48	00:42:53	6-4	A	N
24	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:43:20	00:43:25	6-4	A	T
25	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:43:44	00:43:49	6-4	A	N
26	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:44:08	00:44:13	6-4	A	N
27	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:46:05	00:46:10	6-5	A	T
28	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:46:23	00:46:28	6-5	A	T
29	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:46:37	00:46:42	6-5	A	N
30	11	TNT	Neutral	EEG OP	EEGP-C	EEGC-O	00:47:08	00:47:13	6-5	A	T

TAPE # 3A

DIGITAL INFORMATION							ANALOG INFORMATION				
File #	# of Rec.	CONTENTS IN-CHANNEL 1	2	3	4	5	TIME CODE START	MAKER	Rec Ses	Rat. #	
31	11	TNT	Neutral	EEG OP	EEG PC	EEGC-O	00:47:47	00:47:52	6-5	A	N
32	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:07:52	1:07:57	7-1	B	T
33	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:08:23	1:08:28	7-1	B	N
34	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:08:52	1:08:57	7-1	B	N
35	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:09:18	1:09:23	7-1	B	T
36	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:09:44	1:09:49	7-1	B	T
37	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:10:09	1:10:14	7-1	B	N
38	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:11:40	1:11:45	7-2	B	T
39	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:12:09	1:12:14	7-2	B	N
40	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:12:47	1:12:52	7-2	B	N
41	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:13:23	1:13:28	7-2	B	T
42	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:13:46	1:13:51	7-2	B	T
43	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:15:03	1:15:08	7-3	B	T
44	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:15:29	1:15:34	7-3	B	N
45	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:16:02	1:16:07	7-3	B	T
46	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:16:32	1:16:37	7-3	B	T
47	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:16:56	1:17:01	7-3	B	N
48	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:17:25	1:17:30	7-3	B	T
49	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:18:58	1:19:03	7-4	B	N
50	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:19:39	1:19:44	7-4	B	T
51	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:20:13	1:20:18	7-4	B	N
52	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:21:14	1:21:19	7-4	B	T
53	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:22:09	1:22:14	7-4	B	N
54	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:22:51	1:22:56	7-4	B	T
55	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:24:10	1:24:15	7-5	B	N
56	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:24:32	1:24:37	7-5	B	N
57	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:24:58	1:25:03	7-5	B	T
58	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:25:23	1:25:28	7-5	B	T
59	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:26:19	1:26:24	7-5	B	T
60	11	TNT	Neutral	EEG P	EEG C	EEG-O	1:26:59	1:27:04	7-5	B	N

TAPE # 3A

File #	# of Rec.	DIGITAL INFORMATION: CONTENTS IN CHANNEL 1	2	3	4	5	ANALOG INFORMATION: TIME CODE START	MAKER	Rec Ses	Rat. #	D
61	11	TNT	Neutral	EEG C	EEG P	EEG O	1:06:39	1:06:44	1-1	C	N
62	11	TNT	Neutral	EEG C	EEG P	EEG O	1:07:00	1:07:05	1-1	C	N
63	11	TNT	Neutral	EEG C	EEG P	EEG O	1:07:21	1:07:26	1-1	C	T
64	11	TNT	Neutral	EEG C	EEG P	EEG O	1:07:47	1:07:52	1-1	C	N
65	11	TNT	Neutral	EEG C	EEG P	EEG O	1:08:18	1:08:23	1-1	C	T
66	11	TNT	Neutral	EEG C	EEG P	EEG O	1:09:06	1:09:11	1-1	C	N
67	11	TNT	Neutral	EEG C	EEG P	EEG O	1:09:35	1:09:40	1-1	C	T
68	11	TNT	Neutral	EEG C	EEG P	EEG O	1:10:56	1:10:01	1-1	C	T
69	11	TNT	Neutral	EEG C	EEG P	EEG O	1:11:27	1:11:32	1-2	C	T
70	11	TNT	Neutral	EEG C	EEG P	EEG O	1:11:49	1:11:54	1-2	C	T
71	11	TNT	Neutral	EEG C	EEG P	EEG O	1:12:11	1:12:16	1-2	C	N
72	11	TNT	Neutral	EEG C	EEG P	EEG O	1:12:36	1:12:41	1-2	C	N
73	11	TNT	Neutral	EEG C	EEG P	EEG O	1:13:03	1:13:08	1-2	C	N
74	11	TNT	Neutral	EEG C	EEG P	EEG O	1:13:21	1:13:26	1-2	C	T
75	11	TNT	Neutral	EEG C	EEG P	EEG O	1:13:51	1:13:56	1-2	C	T
76	11	TNT	Neutral	EEG C	EEG P	EEG O	1:15:14	1:15:19	1-3	C	T
77	11	TNT	Neutral	EEG C	EEG P	EEG O	1:15:52	1:15:57	1-3	C	N
78	11	TNT	Neutral	EEG C	EEG P	EEG O	1:16:23	1:16:28	1-3	C	N
79	11	TNT	Neutral	EEG C	EEG P	EEG O	1:16:51	1:16:56	1-3	C	T
80	11	TNT	Neutral	EEG C	EEG P	EEG O	1:17:25	1:17:30	1-3	C	N
81	11	TNT	Neutral	EEG C	EEG P	EEG O	1:17:44	1:17:49	1-3	C	N
82	11	TNT	Neutral	EEG C	EEG P	EEG O	1:18:13	1:18:18	1-3	C	T
83	11	TNT	Neutral	EEG C	EEG P	EEG O	1:19:26	1:19:31	1-4	C	T
84	11	TNT	Neutral	EEG C	EEG P	EEG O	1:19:46	1:19:51	1-4	C	T
85	11	TNT	Neutral	EEG C	EEG P	EEG O	1:20:19	1:20:24	1-4	C	T
86	11	TNT	Neutral	EEG C	EEG P	EEG O	1:20:38	1:20:43	1-4	C	N
87	11	TNT	Neutral	EEG C	EEG P	EEG O	1:21:02	1:21:07	1-4	C	N
88	11	TNT	Neutral	EEG C	EEG P	EEG O	1:21:30	1:21:35	1-4	C	T
89	11	TNT	Neutral	EEG C	EEG P	EEG O	1:22:47	1:22:52	1-5	C	N
90	11	TNT	Neutral	EEG C	EEG P	EEG O	1:23:05	1:23:10	1-5	C	N

TAPE # 3A

DIGITAL INFORMATION							ANALOG INFORMATION				
File #	# of Rec.	CONTENTS IN CHANNEL 1	2	3	4	5	TIME CODE START	MAKER	Rec Ses	Rat. #	Da
91	11	TNT	Neutral	EEG C	EEG P	EEG O	1:23:25	1:23:30	1-5	C	T
92	11	TNT	Neutral	EEG C	EEG P	EEG O	1:23:45	1:23:50	1-5	C	T
93	11	TNT	Neutral	EEG C	EEG P	EEG O	1:24:00	1:24:05	1-5	C	N
94	11	TNT	Neutral	EEG C	EEG P	EEG O	1:24:20	1:24:25	1-5	C	T
95	11	TNT	Neutral	EEG C	EEG P	EEG O	1:24:39	1:24:44	1-5	C	T
96	11	TNT	Neutral	EEG C	EEG P	EEG O	1:47:12	1:47:17	2-1	C	T
97	11	TNT	Neutral	EEG C	EEG P	EEG O	1:47:51	1:47:56	2-1	C	N
98	11	TNT	Neutral	EEG C	EEG P	EEG O	1:48:30	1:48:35	2-1	C	N
99	11	TNT	Neutral	EEG C	EEG P	EEG O	1:49:35	1:49:40	2-1	C	T
100	11	TNT	Neutral	EEG C	EEG P	EEG O	1:50:12	1:50:17	2-1	C	T
101	11	TNT	Neutral	EEG C	EEG P	EEG O	1:51:05	1:51:10	2-1	C	N
102	11	TNT	Neutral	EEG P	EEG C	EEG O	1:53:20	1:53:25	2-2	C	N
103	11	TNT	Neutral	EEG P	EEG C	EEG O	1:53:56	1:54:01	2-2	C	N
104	11	TNT	Neutral	EEG P	EEG C	EEG O	1:54:30	1:54:35	2-2	C	T
105	11	TNT	Neutral	EEG P	EEG C	EEG O	1:55;18	1:55:23	2-2	C	T
106	11	TNT	Neutral	EEG P	EEG C	EEG O	1:56:45	1:56:50	2-2	C	N
107	11	TNT	Neutral	EEG P	EEG C	EEG O	1:57;15	1:57:20	2-2	C	T
108	11	TNT	Neutral	EEG P	EEG C	EEG O	1:59:25	1:59:30	2-2	C	T
109	11	TNT	Neutral	EEG P	EEG C	EEG O	1:59:51	1:59:56	2-3	C	N
110	11	TNT	Neutral	EEG P	EEG C	EEG O	2:00:13	2:00:18	2-3	C	N
111	11	TNT	Neutral	EEG P	EEG C	EEG O	2:00:36	2:00:41	2-3	C	T
112	11	TNT	Neutral	EEG P	EEG C	EEG O	2:00:57	2:01:02	2-3	C	N
113	11	TNT	Neutral	EEG P	EEG C	EEG O	2:01:27	2:01:32	2-3	C	T
114	11	TNT	Neutral	EEG P	EEG C	EEg O	2:03:09	2:03:14	2-4	C	T
115	11	TNT	Neutral	EEG P	EEG C	EEG O	2:03:34	2:03:39	2-4	C	N
116	11	TNT	Neutral	EEG P	EEG C	EEG O	2:04:00	2:04:05	2-4	C	N
117	11	TNT	Neutral	EEG P	EEG C	EEG O	2:04:23	2:04:28	2-4	C	T
118	11	TNT	Neutral	EEG P	EEG C	EEG O	2:04:56	2:05:01	2-4	C	T
119	11	TNT	Neutral	EEG P	EEG C	EEG O	2:05:34	2:05:39	2-4	C	N
120	11	TNT	Neutral	EEG P	EEG C	EEG O	2:07:34	2:07:39	2-5	C	N

TAPE # 3A

File #	# of Rec.	DIGITAL INFORMATION CONTENTS IN-CHANNEL 1	2	3	4	5	ANALOG INFORMATION TIME CODE START	MAKER	Rec Ses	Rat. #	Da
121	11	TNT	Neutral	EEG P	EEG C	EEG O	2:08:07	2:08:12	2-5	C	T
121-1	11	TNT	Neutral	EEG P	EEG C	EEG O	2:08:58	2:09:03	2-5	C	N
123	11	TNT	Neutral	EEG P	EEG C	EEG O	2:09:45	2:09:50	2-5	C	T
124	11	TNT	Neutral	EEG P	EEG C	EEG O	2:10:22	2:10:27	2-5	C	N
125	11	TNT	Neutral	EEG P	EEG C	EEG O	2:10:51	2:10:56	2-5	C	T
126	11	TNT	Neutral	EEG P	EEG C	EEG O	2:11:25	2:11:30	2-5	C	T
127	11	TNT	Neutral	EEG P	EEG O	EEG C	2:43:01	2:43:06	3-1	C	T
128	11	TNT	Neutral	EEG P	EEG O	EEG C	2:43:47	2:43:52	3-1	C	N
129	11	TNT	Neutral	EEG P	EEG O	EEG C	2:44:27	2:44:32	3-1	C	T
130	11	TNT	Neutral	EEG P	EEG O	EEG C	2:45:02	2:45:07	3-1	C	T
131	11	TNT	Neutral	EEG P	EEG O	EEG C	2:45:37	2:45:42	3-1	C	N
132	11	TNT	Neutral	EEG P	EEG O	EEG C	2:46:12	2:46:17	3-1	C	T
133	11	TNT	Neutral	EEG P	EEG O	EEG C	2:47:16	2:47:21	3-2	C	N
134	11	TNT	Neutral	EEG P	EEG O	EEG C	2:47:41	2:47:46	3-2	C	N
135	11	TNT	Neutral	EEG P	EEG O	EEG C	2:48:13	2:48:18	3-2	C	T
136	11	TNT	Neutral	EEG P	EEG O	EEG C	2:48:46	2:48:51	3-2	C	T
137	11	TNT	Neutral	EEG P	EEG O	EEG C	2:49:18	2:49:23	3-2	C	T
138	11	TNT	Neutral	EEG P	EEG O	EEG C	2:49:37	2:49:42	3-2	C	N
139	11	TNT	Neutral	EEG P	EEG O	EEG C	2:50:50	2:50:55	3-3	C	T
140	11	TNT	Neutral	EEG P	EEG O	EEG C	2:51:25	2:51:30	3-3	C	T
141	11	TNT	Neutral	EEG P	EEG O	EEG C	2:52:02	2:52:07	3-3	C	N
142	11	TNT	Neutral	EEG P	EEG O	EEG C	2:52:32	2:52:37	3-3	C	N
143	11	TNT	Neutral	EEG P	EEG O	EEG C	2:52:59	2:53:04	3-3	C	N
144	11	TNT	Neutral	EEG P	EEG O	EEG C	2:53:28	2:53:33	3-3	C	T
145	11	TNT	Neutral	EEG P	EEG O	EEG C	2:54:32	2:54:37	3-4	C	T
146	11	TNT	Neutral	EEG P	EEG O	EEG C	2:55:00	2:55:05	3-4	C	T
147	11	TNT	Neutral	EEG P	EEG O	EEG C	2:55:25	2:55:30	3-4	C	N
148	11	TNT	Neutral	EEG P	EEG O	EEG C	2:55:46	2:55:51	3-4	C	N
149	11	TNT	Neutral	EEG P	EEG O	EEG C	2:56:00	2:56:05	3-4	C	T
150	11	TNT	Neutral	EEG P	EEG O	EEG C	2:56:18	2:56:23	3-4	C	N

TAPE # 3A

DIGITAL INFORMATION							ANALOG INFORMATION				
File #	# of Rec.	CONTENTS IN-CHANNEL 1	2	3	4	5	TIME CODE START	MAKER	Rec Ses	Rat. #	Da
151	11	TNT	Neutral	EEG P	EEG O	EEG C	2:57:27	2:57:32	3-5	C	N
152	11	TNT	Neutral	EEG P	EEG O	EEG C	2:57:57	2:58:02	3-5	C	T
153	11	TNT	Neutral	EEG P	EEG O	EEG C	2:58:13	2:58:18	3-5	C	T
154	11	TNT	Neutral	EEG P	EEG O	EEG C	2:58:29	2:58:34	3-5	C	N
155	11	TNT	Neutral	EEG P	EEG O	EEG C	2:58:48	2:58:53	3-5	C	T
156	11	TNT	Neutral	EEG P	EEG O	EEG C	2:59:24	2:59:29	3-5	C	N

TAPE # 4A

DIGITAL INFORMATION							ANALOG INFORMATION				
File #	# of Rec.	CONTENTS IN CHANNEL 1	2	3	4	5	TIME CODE START	MAKER	Rec Ses	Rat. #	Da
1	11	TNT	Neutral	EEG O	EEG P	EEG C	00:24:42	------	Baseline		
2	11	TNT	Neutral	EEG O	EEG P	EEG C	00:32:19	00:32:24	1-P	98	T
3	11	TNT	Neutral	EEG O	EEG P	EEG C	00:37:50	00:32:55	1-P	98	N
4	11	TNT	Neutral	EEG O	EEG P	EEG C	00:33:17	00:33:22	1-P	98	N
5	11	TNT	Neutral	EEG O	EEG P	EEG C	00:33:44	00:33:49	1-P	98	T
6	11	TNT	Neutral	EEG O	EEG P	EEG C	00:34:23	00:34:28	1-P	98	N
7	11	TNT	Neutral	EEG O	EEG P	EEG C	00:35:17	00:35:22	1-P	98	T
8	11	TNT	Neutral	EEG O	EEG P	EEG C	00:36:00	00:36:05	1-P	98	N
9	11	TNT	Neutral	EEG O	EEG P	EEG C	00:36:28	00:36:33	1-P	98	T
10	11	TNT	Neutral	EEG O	EEG P	EEG C	00:37:05	00:37:10	1-P	98	N
11	11	TNT	Neutral	EEG O	EEG P	EEG C	00:37:37	00:37:42	1-P	98	T
12	11	TNT	Neutral	EEG O	EEG P	EEG C	00:38:03	00:38:08	1-P	98	N
13	11	TNT	Neutral	EEG O	EEG P	EEG C	00:38:35	00:38:40	1-P	98	T
14	11	TNT	Neutral	EEG O	EEG P	EEG C	00:39:11	00:39:16	1-P	98	T
15	11	TNT	Neutral	EEG O	EEG P	EEG C	00:39:37	00:39:42	1-P	98	N
16	11	TNT	Neutral	EEG O	EEG P	EEG C	00:40:22	00:40:27	1-P	98	T
17	11	TNT	Neutral	EEG O	EEG P	EEG C	00:41:01	00:41:06	1-P	98	T
18	11	TNT	Neutral	EEG O	EEG P	EEG C	00:41:50	00:41:55	1-P	98	N
19	11	TNT	Neutral	EEG O	EEG P	EEG C	00:42:26	00:42:31	1-P	98	N
20	11	TNT	Neutral	EEG O	EEG P	EEG C	oo:42:55	00:43:00	1-P	98	T
21	11	TNT	Neutral	EEG O	EEG P	EEG C	00:43:15	00:43:20	1-P	98	T
22	11	TNT	Neutral	EEG O	EEG P	EEG C	00:43:32	00:43:37	1-P	98	N
23	11	TNT	Neutral	EEG O	EEG P	EEG C	00:43:57	00:44:02	1-P	98	T
24	11	TNT	Neutral	EEG O	EEG P	EEG C	00:44:31	00:44:36	1-P	98	N
25	11	TNT	Neutral	EEG O	EEG P	EEG C	00:45:05	00:45:10	1-P	98	N
26	11	TNT	Neutral	EEG O	EEG P	EEG C	00:45:39	00:45:44	1-P	98	T
27	11	TNT	Neutral	EEG O	EEG P	EEG C	00:46:01	00:46:06	1-P	98	N
28	11	TNT	Neutral	EEG O	EEG P	EEG C	00:46:27	00:46:32	1-P	98	N
29	11	TNT	Neutral	EEG O	EEG P	EEG C	00:46:46	00:46:51	1-P	98	T
30	11	TNT	Neutral	EEG O	EEG P	EEG C	00:50:11	00:50:16	1-1	98	N

TAPE # 4A

DIGITAL INFORMATION							ANALOG INFORMATION			
File #	# of Rec.	CONTENTS IN CHANNEL 1	2	3	4	5	TIME CODE START	MAKER	Rec Ses	at. #
31	11	TNT	Neutral	EEG O	EEG P	EEG C	00:50:47	00:50:52	1-1	98 T
32	11	TNT	Neutral	EEG O	EEG P	EEG C	00:51:23	00:51:28	1-1	98 N
33	11	TNT	Neutral	EEG O	EEG P	EEG C	00:52:04	00:52:09	1-1	98 T
34	11	TNT	Neutral	EEG O	EEG P	EEG C	00:52:41	00:52:46	1-1	98 T
35	11	TNT	Neutral	EEG O	EEG P	EEG C	00:53:07	00:53:12	1-1	98 N
36	11	TNT	Neutral	EEG O	EEG P	EEG C	00:55:27	00:55:32	1-2	98 N
37	11	TNT	Neutral	EEG O	EEG P	EEG C	00:56:18	00:56:23	1-2	98 T
38	11	TNT	Neutral	EEG O	EEG P	EEG C	00:56:49	00:56:54	1-2	98 N
39	11	TNT	Neutral	EEG O	EEG P	EEG C	00:57:32	00:57:37	1-2	98 T
40	11	TNT	Neutral	EEG O	EEG P	EEG C	00:58:11	00:58:16	1-2	98 N
41	11	TNT	Neutral	EEG O	EEG P	EEG C	00:58:43	00:58:48	1-2	98 T
42	11	TNT	Neutral	EEG O	EEG P	EEG C	1:01:12	1:01:17	1-3	98 N
43	11	TNT	Neutral	EEG O	EEG P	EEG C	1:01:53	1:01:58	1-3	98 T
44	11	TNT	Neutral	EEG O	EEG P	EEG C	1:02:27	1:02:32	1-3	98 N
45	11	TNT	Neutral	EEG O	EEG P	EEG C	1:02:46	1:02:51	1-3	98 N
46	11	TNT	Neutral	EEG O	EEG P	EEG C	1:03:03	1:03:08	1-3	98 T
47	11	TNT	Neutral	EEG O	EEG P	EEG C	1:03:20	1:03:25	1-3	98 N
48	11	TNT	Neutral	EEG P-C	EEGC-O	EEGP-O	1:27:29	1:27:34	2-1	98 T
49	11	TNT	Neutral	EEG P-C	EEGC-O	EEGP-O	1:28:06	1:28:11	2-1	98 N
50	11	TNT	Neutral	EEG P-C	EEGC-O	EEGP-O	1:28:41	1:28:46	2-1	98 T
51	11	TNT	Neutral	EEG P-C	EEGC-O	EEGP-O	1:29:12	1:29:17	2-1	98 N
52	11	TNT	Neutral	EEG P-C	EEGC-O	EEGP-O	1:29:38	1:29:43	2-1	98 T
53	11	TNT	Neutral	EEG P-C	EEGC-O	EEGP-O	1:30:04	1:30:09	2-1	98 T
54	11	TNT	Neutral	EEG P-C	EEGC-O	EEGP-O	1:31:58	1:32:03	2-2	98 N
55	11	TNT	Neutral	EEG P-C	EEGC-O	EEGP-O	1:32:16	1:32:21	2-2	98 N
56	11	TNT	Neutral	EEG P-C	EEGC-O	EEGP-O	1:32:59	1:33:04	2-2	98 T
57	11	TNT	Neutral	EEG P-C	EEGC-O	EEGP-O	1:33:37	1:33:42	2-2	98 T
58	11	TNT	Neutral	EEG P-C	EEGC-O	EEGP-O	1:33:57	1:34:02	2-2	98 N
59	11	TNT	Neutral	EEG P-C	EEGC-O	EEGP-O	1:34:20	1:34:25	2-2	98 T
60	11	TNT	Neutral	EEG P-C	EEGC-O	EEGP-O	1:37:46	1:37:51	2-3	98 T

TAPE # 4A

File #	# of Rec.	DIGITAL INFORMATION: CONTENTS IN-CHANNEL 1	2	3	4	5	ANALOG INFORMATION: TIME CODE START	MAKER	Rec Ses	Stat. #	D
61	11	TNT	Neutral	EEG P-C	EEG CO	EEGP-O	1:38:21	1:38:26	2-3	98	N
62	11	TNT	Neutral	EEG P-C	EEG CO	EEGP-O	1:38:44	1:38:49	2-3	98	N
63	11	TNT	Neutral	EEG P-C	EEG CO	EEGP-O	1:39:04	1:39:09	2-3	98	T
64	11	TNT	Neutral	EEG P-C	EEG CO	EEGP-O	1:39:26	1:39:31	2-3	98	T
65	11	TNT	Neutral	EEG P-C	EEG CO	EEGP-O	1:39:47	1:39:52	2-3	98	N
66	11	TNT	Neutral	EEG P-C	EEG CO	EEGP-O	1:41:38	1:41:43	2-4	98	T
67	11	TNT	Neutral	EEG P-C	EEG CO	EEGP-O	1:42:02	1:42:07	2-4	98	N
68	11	TNT	Neutral	EEG P-C	EEG CO	EEGP-O	1:42:22	1:42:27	2-4	98	T
69	11	TNT	Neutral	EEG P-C	EEG CO	EEGP-O	1:42:41	1:42:46	2-4	98	N
70	11	TNT	Neutral	EEG P-C	EEG CO	EEGP-O	1:42:58	1:43:03	2-4	98	N
71	11	TNT	Neutral	EEG P-C	EEG CO	EEGP-O	1:43:20	1:43:25	2-4	98	T
72	11	TNT	Neutral	EEG C	EEG O	EEG P	2:14:59	2:15:04	4-1	C	N
73	11	TNT	Neutral	EEG C	EEG O	EEG P	2:16:36	2:16:41	4-1	C	N
74	11	TNT	Neutral	EEG C	EEG O	EEG P	2:16:57	2:17:02	4-1	C	T
75	11	TNT	Neutral	EEG C	EEG O	EEG P	2:17:19	2:17:24	4-1	C	T
76	11	TNT	Neutral	EEG C	EEG O	EEG P	2:17:53	2:17:58	4-1	C	N
77	11	TNT	Neutral	EEG C	EEG O	EEG P	2:18:52	2:18:16	4-1	C	T
78	11	TNT	Neutral	EEG C	EEG O	EEG P	2:19:32	2:19:37	4-2	C	T
79	11	TNT	Neutral	EEG C	EEG O	EEG P	2:20:13	2:20:18	4-2	C	N
80	11	TNT	Neutral	EEG C	EEG O	EEG P	2:20:57	2:21:02	4-2	C	T
81	11	TNT	Neutral	EEG C	EEG O	EEG P	2:21:28	2:21:33	4-2	C	N
82	11	TNT	Neutral	EEG C	EEG O	EEG P	2:22:08	2:22:13	4-2	C	T
83	11	TNT	Neutral	EEG C	EEG O	EEG P	2:22:52	2:22:57	4-2	C	N
84	11	TNT	Neutral	EEG C	EEG O	EEG P	2:25:00	2:25:05	4-3	C	N
85	11	TNT	Neutral	EEG C	EEG O	EEG P	2:25:42	2:25:47	4-3	C	T
86	11	TNT	Neutral	EEG C	EEG O	EEG P	2:26:10	2:26:15	4-3	C	T
87	11	TNT	Neutral	EEG C	EEG O	EEG P	2:26:32	2:26:37	4-3	C	N
88	11	TNT	Neutral	EEG C	EEG O	EEG P	2:26:59	2:27:04	4-3	C	T
89	11	TNT	Neutral	EEG C	EEG O	EEG P	2:27:18	2:27:23	4-3	C	T
90	11	TNT	Neutral	EEG C	EEG O	EEG P	2:28:51	2:28:56	4-4	C	N

TAPE # 4A

DIGITAL INFORMATION							ANALOG INFORMATION				
File #	# of Rec.	CONTENTS IN CHANNEL 1	2	3	4	5	TIME CODE START	MAKER	Rec Ses	Rat. #	
91	11	TNT	Neutral	EEG C	EEG O	EEG P	2:29:25	2:29:30	4-4	C	N
92	11	TNT	Neutral	EEG C	EEG O	EEG P	2:29:47	2:29:52	4-4	C	T
93	11	TNT	Neutral	EEG C	EEG O	EEG P	2:30:16	2:30:21	4-4	C	N
94	11	TNT	Neutral	EEG C	EEG O	EEG P	2:30:59	2:31:04	4-4	C	T
95	11	TNT	Neutral	EEG C	EEG O	EEG P	2:31:32	2:31:37	4-4	C	N
96	11	TNT	Neutral	EEG C	EEG O	EEG P	2:33:17	2:33:22	4-5	C	T
97	11	TNT	Neutral	EEG C	EEG O	EEG P	2:33:57	2:34:02	4-5	C	N
98	11	TNT	Neutral	EEG C	EEG O	EEG P	2:34:17	2:34:22	4-5	C	N
99	11	TNT	Neutral	EEG C	EEG O	EEG P	2:34:49	2:34:54	4-5	C	T
100	11	TNT	Neutral	EEG C	EEG O	EEG P	2:35:29	2:35:34	4-5	C	N
101	11	TNT	Neutral	EEG C	EEG O	EEG P	2:36:29	2:36:34	4-5	C	T
102	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:11:33	3:11:38	3-1	98	T
103	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:12:19	3:12:24	3-1	98	N
104	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:12:54	3:12:59	3-1	98	N
105	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:13:18	3:13:23	3-1	98	T
106	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:13:47	3:13:52	3-1	98	T
107	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:14:21	3:14:26	3-1	98	T
108	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:15:46	3:15:51	3-2	98	T
109	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:16:12	3:16:17	3-2	98	N
110	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:16:48	3:16:53	3-2	98	T
111	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:17:22	3:17:27	3-2	98	N
112	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:18:10	3:18:15	3-2	98	N
113	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:18:43	3:18:48	3-2	98	T
114	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:19:58	3:20:03	3-3	98	N
115	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:20:23	3:20:28	3-3	98	N
116	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:20:44	3:20:49	3-3	98	T
117	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:21:02	3:21:07	3-3	98	T
118	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:21:27	3:21:32	3-3	98	N
119	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:21:54	3:21:59	3-3	98	T
120	11	TNT	Neutral	EEG CO	EEGPO	EEG PC	3:23:02	3:23:07	3-4	98	N

TAPE # 4A

File #	# of Rec.	DIGITAL INFORMATION: CONTENTS IN-CHANNEL 1	2	3	4	5	ANALOG INFORMATION: TIME CODE START	MAKER	Rec Ses	Rat. #	D.
121	11	TNT	Neutral	EEG CO	EEG PO	EEGPC	3:23:22	3:23:27	3-4	98	N
122	11	TNT	Neutral	EEG CO	EEG PO	EEG PC	3:23:54	3:23:59	3-4	98	T
123	11	TNT	Neutral	EEG CO	EEG PO	EEG PC	3:24:16	3:24:21	3-4	98	T
124	11	TNT	Neutral	EEG CO	EEG PO	EEG PC	3:24:39	3:24:44	3-4	98	N
125	11	TNT	Neutral	EEG CO	EEG PO	EEG PC	3:25:02	3:25:07	3-4	98	T
126	11	TNT	Neutral	EEG CO	EEG PO	EEG PC	3:26:29	3:26:34	3-5	98	T
127	11	TNT	Neutral	EEG CO	EEG PO	EEG PC	3:27:00	3:27:05	3-5	98	T
128	11	TNT	Neutral	EEG CO	EEG PO	EEG PC	3:27:20	3:27:25	3-5	98	N
129	11	TNT	Neutral	EEG CO	EEG PO	EEG PC	3:27:39	3:27:44	3-5	98	N
130	11	TNT	Neutral	EEG CO	EEG PO	EEG PC	3:27:57	3:28:02	3-5	98	T
131	11	TNT	Neutral	EEG CO	EEG PO	EEG PC	3:28:18	3:28:23	3-5	98	N
132	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	3:50:56	3:51:01	5-1	C	T
133	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	3:51:36	3:51:41	5-1	C	T
134	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	3:52:15	3:52:18	5-1	C	N
135	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	3:52:41	3:52:46	5-1	C	N
136	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	3:53:26	3:53:31	5-1	C	T
137	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	3:53:52	3:53:57	5-1	C	N
138	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	3:55:24	3:55:29	5-2	C	N
139	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	3:55:52	3:55:57	5-2	C	T
140	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	3:56:17	3:56:23	5-2	C	T
141	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	3:56:51	3:56:56	5-2	C	N
142	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	3:57:25	3:57:30	5-2	C	T
143	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	3:57:53	3:57:58	5-2	C	N
144	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	3:59:13	3:59:18	5-2	C	T
145	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	3:59:42	3:59:47	5-3	C	N
146	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	4:00:18	4:00:23	5-3	C	T
147	11	TN.	Neutral	EEG PO	EEG PC	EEG CO	4:00:42	4:00:47	5-3	C	N
148	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	4:01:29	4:01:34	5-3	C	T
149	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	4:02:57	4:03:02	5-4	C	N
150	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	4:03:28	4:03:33	5-4	C	T

TAPE # 4A

DIGITAL INFORMATION							ANALOG INFORMATION				
File #	# of Rec.	CONTENTS IN-CHANNEL 1	2	3	4	5	TIME CODE START	MAKER	Rec Ses #	Rat.	
151	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	4:04:10	4:04:15	5-4	C	T
152	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	4:04:39	4:04:44	5-4	C	N
153	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	4:05:04	4:05:09	5-4	C	T
154	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	4:05:28	4:05:33	5-4	C	N
155	11	TNT	Neutral	EEG PO	EEG PC	EEG Co	4:06:58	4:07:03	5-5	C	T
156	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	4:07:27	4:07:32	5-5	C	N
157	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	4:07:49	4:07:54	5-5	C	T
158	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	4:08:12	4:08:17	5-5	C	N
159	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	4:08:36	4:08:41	5-5	C	T
160	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	4:09:01	4:09:06	5-5	C	N

TAPE # 5A

File #	# of Rec.	DIGITAL INFORMATION: CONTENTS IN-CHANNEL 1	2	3	4	5	ANALOG INFORMATION: TIME CODE START	MAKER	Rec Ses	Rat. #	
1	11	TNT	Neutral	EEG O	EEG P	EEG C	00:27:00	N/A	1	G	B
2	11	TNT	Neutral	EEG O	EEG P	EEG C	00:30:50	00:30:55	1-1	G	T
3	11	TNT	Neutral	EEG O	EEG P	EEG C	00:31:42	00:31:47	1-1	G	N
4	11	TNT	Neutral	EEG O	EEG P	EEG C	00:32:25	00:32:30	1-1	G	N
5	11	TNT	Neutral	EEG O	EEG P	EEG C	00:33:10	00:33:15	1-1	G	T
6	11	TNT	Neutral	EEG O	EEG P	EEG C	00:33:55	00:34:00	1-1	G	N
7	11	TNT	Neutral	EEG O	EEG P	EEG C	00:34:40	00:34:45	1-1	G	T
8	11	TNT	Neutral	EEG O	EEG P	EEG C	00:35:19	00:35:24	1-2	G	T
9	11	TNT	Neutral	EEG O	EEG P	EEG C	00:35:55	00:36:00	1-2	G	N
10	11	TNT	Neutral	EEG O	EEG P	EEG C	00:36:58	00:37:03	1-2	G	T
11	11	TNT	Neutral	EEG O	EEG P	EEG C	00:37:47	00:37:52	1-2	G	N
12	11	TNT	Neutral	EEG O	EEG P	EEG C	00:38:35	00:38:40	1-2	G	T
13	11	TNT	Neutral	EEG O	EEG P	EEG C	00:39:16	00:39:21	1-2	G	N
14	11	TNT	Neutral	EEG O	EEG P	EEG C	-----	-----	--	--	-
15	11	TNT	Neutral	EEG O	EEG P	EEG C	00:40:05	00:40:10	1-3	G	N
16	11	TNT	Neutral	EEG O	EEG P	EEG C	00:40:34	00:40:39	1-3	G	N
17	11	TNT	Neutral	EEG O	EEG P	EEG C	00:40:53	00:40:58	1-3	G	T
18	11	TNT	Neutral	EEG O	EEG P	EEG C	00:41:10	00:41:15	1-3	G	T
19	11	TNT	Neutral	EEG O	EEG P	EEG C	00:41:29	00:41:34	1-3	G	N
20	11	TNT	Neutral	EEG O	EEG P	EEG C	00:41:54	00:41:59	1-3	G	T
21	11	TNT	Neutral	EEG O	EEG P	EEG C	00:42:15	00:42:20	1-4	G	T
22	11	TNT	Neutral	EEG O	EEG P	EEG C	00:42:30	00:42:35	1-4	G	T
23	11	TNT	Neutral	EEG O	EEG P	EEG C	00:43:00	00:43:05	1-4	G	N
24	11	TNT	Neutral	EEG O	EEG P	EEG C	00:43:26	00:43:31	1-4	G	N
25	11	TNT	Neutral	EEG O	EEG P	EEG C	00:44:00	00:44:05	1-4	G	N
26	11	TNT	Neutral	EEG O	EEG P	EEG C	00:44:55	00:45:00	1-4	G	T
27	11	TNT	Neutral	EEG O	EEG P	EEG C	00:45:40	00:45:45	1-4	G	T
28	11	TNT	Neutral	EEG O	EEG P	EEG C	00:46:00	00:46:05	1-4	G	T
29	11	TNT	Neutral	EEG O	EEG P	EEG C	00:46:21	00:46:26	1-4	G	N
30	11	TNT	Neutral	EEG O	EEG P	EEG C	00:47:09	00:47:14	1-4	G	N

TAPE # 5A

File #	# of Rec.	DIGITAL INFORMATION: CONTENTS IN-CHANNEL 1	2	3	4	5	ANALOG INFORMATION: TIME CODE START	MAKER	Rec. Ses.	Rat. #	
31	11	TNT	Neutral	EEG O	EEG P	EEG C	00:47:42	00:47:47	1-5P	G	T
32	11	TNT	Neutral	EEG O	EEG P	EEG C	00:48:07	00:48:12	1-5P	G	N
33	18	TNT	Neutral	EEG O	EEG P	EEG C	00:50:00	00:50:05	1-1	G	T
34	11	TNT	Neutral	EEG O	EEG P	EEG C	00:50:28	00:50:33	1-1	G	T
35	11	TNT	Neutral	EEG O	EEG P	EEG C	00:51:05	00:51:10	1-1	G	N
36	11	TNT	Neutral	EEG O	EEG P	EEG C	00:52:00	00:52:05	1-1	G	N
37	11	TNT	Neutral	EEG O	EEG P	EEG C	00:52:37	00:52:42	1-1	G	T
38	11	TNT	Neutral	EEG O	EEG P	EEG C	00:53:09	00:53:14	1-1	G	N
39	11	TNT	Neutral	EEG O	EEG P	EEG C	00:54:35	00:54:40	1-2	G	N
40	11	TNT	Neutral	EEG O	EEG P	EEG C	00:54:55	00:55:00	1-2	G	N
41	11	TNT	Neutral	EEG O	EEG P	EEG C	00:55:16	00:55:21	1-2	G	T
42	11	TNT	Neutral	EEG O	EEG P	EEG C	00:55:39	00:55:44	1-2	G	T
43	11	TNT	Neutral	EEG O	EEG P	EEG C	00:56:16	00:56:21	1-2	G	N
44	11	TNT	Neutral	EEG O	EEG P	EEG C	00:56:38	00:56:43	1-2	G	T
45	11	TNT	Neutral	EEG O	EEG P	EEG C	00:57:55	00:58:00	1-3	G	T
46	11	TNT	Neutral	EEG O	EEG P	EEG C	00:58:20	00:58:25	1-3	G	T
47	11	TNT	Neutral	EEG O	EEG P	EEG C	00:59:00	00:59:05	1-3	G	N
48	11	TNT	Neutral	EEG O	EEG P	EEG C	00:59:36	00:59:41	1-3	G	N
49	11	TNT	Neutral	EEG O	EEG P	EEG C	1:00:08	1:00:13	1-3	G	T
50	11	TNT	Neutral	EEG O	EEG P	EEG C	1:00:44	1:00:49	1-3	G	N
51	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:32:17	1:32:22	2-1	G	T
52	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:32:51	1:32:56	2-1	G	N
53	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:33:29	1:33:34	2-1	G	T
54	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:34:23	1:34:28	2-1	G	N
55	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:35:06	1:35:11	2-1	G	T
56	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:35:42	1:35:47	2-1	G	N
57	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:37:16	1:37:21	2-1	G	N
58	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:37:45	1:37:50	2-1	G	T
59	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:38:37	1:38:42	2-1	G	N
60	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:39:58	1:40:03	2-1	G	T

TAPE · #5A

File #	# of Rec.	DIGITAL INFORMATION: CONTENTS IN CHANNEL 1	2	3	4	5	ANALOG INFORMATION: TIME CODE START	MAKER	Rec Ses	Rat. #	
61	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:40:22	1:40:27	2-2	G	N
62	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:40:45	1:40:50	2-2	G	T
63	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:43:18	1:43:23	2-3	G	T
64	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:43:48	1:43:53	2-3	G	T
65	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:44:19	1:44:24	2-3	G	N
66	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:44:42	1:44:47	2-3	G	N
67	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:45:10	1:45:15	2-3	G	T
68	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:45:36	1:45:41	2-3	G	N
69	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:47:07	1:47:12	2-4	G	T
70	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:47:41	1:47:46	2-4	G	N
71	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:48:16	1:48:21	2-4	G	T
72	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:49:00	1:49:05	2-4	G	N
73	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:49:32	1:49:37	2-4	G	T
74	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:49:54	1:49:59	2-4	G	N
75	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:51:26	1:51:31	2-5	G	T
76	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:52:09	1:52:14	2-5	G	N
77	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:52:45	1:52:50	2-5	G	N
78	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:53:21	1:53:26	2-5	G	T
79	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:54:00	1:54:05	2-5	G	N
80	11	TNT	Neutral	EEG PC	EEG PO	EEG CO	1:54:25	1:54:30	2-5	G	T
81	11	TNT	Neutral	EEG O	EEG P	EEG C	2:14:06	2:14:11	1-pre	97	T
82	11	TNT	Neutral	EEG O	EEG P	EEG C	2:14:25	2:14:30	1-pre	97	N
83	11	TNT	Neutral	EEG O	EEG P	EEG C	2:14:45	2:14:50	1-pre	97	N
84	11	TNT	Neutral	EEG O	EEG P	EEG C	2:15:06	2:15:11	1-pre	97	T
85	11	TNT	Neutral	EEG O	EEG P	EEG C	2:15:28	2:15:33	1-pre	97	T
86	11	TNT	Neutral	EEG O	EEG P	EEG C	2:15:44	2:15:49	1-pre	97	N
87	11	TNT	Neutral	EEG O	EEG P	EEG C	2:16:21	2:16:26	1-pre	97	T
88	11	TNT	Neutral	EEG O	EEG P	EEG C	2:17:10	2:17:15	1-pre	97	N
89	11	TNT	Neutral	EEG O	EEG P	EEG C	2:17:27	2:17:32	1-pre	97	N
90	11	TNT	Neutral	EEG O	EEG P	EEG C	2:17:54	2:17:59	1-pre	97	T

TAPE # 5A

File #	# of Rec.	DIGITAL INFORMATION: CONTENTS IN-CHANNEL 1	2	3	4	5	ANALOG INFORMATION: TIME CODE START	MAKER	Rec Stat. Ses #		
91	11	TNT	Neutral	EEG O	EEG P	EEG C	2:18:23	2:18;28	1-pre	97	T
92	11	TNT	Neutral	EEG O	EEG P	EEG C	2:18:45	2:18;50	1-pre	97	N
93	11	TNT	Neutral	EEG O	EEG P	EEG C	2:19;59	2:20;04	1-pre	97	N
94	11	TNT	Neutral	EEG O	EEG P	EEG C	2:20:24	2:20:29	1-pre	97	T
95	11	TNT	Neutral	EEG O	EEG P	EEG C	2:21:02	2:21:07	1-pre	97	N
96	11	TNT	Neutral	EEG O	EEG P	EEG C	2:21:36	2:21:41	1-pre	97	T
97	11	TNT	Neutral	EEG O	EEG P	EEG C	2:21:54	2:21:59	1-pre	97	N
98	11	TNT	Neutral	EEG O	EEG P	EEG C	2:22:20	2:22:25	1-pre	97	T
99	11	TNT	Neutral	EEG O	EEG P	EEG C	2:23:04	2:23:09	1-pre	97	T
100	11	TNT	Neutral	EEG O	EEG P	EEG C	2:23:39	2:23:44	1-pre	97	N
101	11	TNT	Neutral	EEG O	EEG P	EEG C	2:24:39	2:24:44	1-pre	97	T
102	11	TNT	Neutral	EEG O	EEG P	EEG C	2;24:58	2:25:03	1-pre	97	T
103	11	TNT	Neutral	EEG O	EEG P	EEG C	2:25:49	2:25:54	1-pre	97	N
104	11	TNT	Neutral	EEG O	EEG P	EEG C	2:26:11	2:26:16	1-pre	97	N
105	11	TNT	Neutral	EEG O	EEG P	EEG C	2:26:59	2:27:04	1-pre	97	N
106	11	TNT	Neutral	EEG O	EEG P	EEG C	2:27:29	2:27:34	1-pre	97	T
107	11	TNT	Neutral	EEG O	EEG P	EEG C	2:28:19	2:28:24	1-pre	97	N
108	11	TNT	Neutral	EEG O	EEG P	EEG C	2:28:48	2:28:53	1-pre	97	T
109	11	TNT	Neutral	EEG O	EEG P	EEG C	2:29:13	2:29:18	1-pre	97	N
110	11	TNT	Neutral	EEG O	EEG P	EEG C	2:39:01	2:39:06	1-1	97	T
111	11	TNT	Neutral	EEG O	EEG P	EEG C	2:39:23	2:39:28	1-1	97	T
112	11	TNT	Neutral	EEG O	EEG P	EEG C	2:39:45	2:39:50	1-1	97	N
113	11	TNT	Neutral	EEG O	EEG P	EEG C	2:40:15	2:40:20	1-1	97	N
114	11	TNT	Neutral	EEG O	EEG P	EEG C	2:40:51	2:40:56	1-1	97	T
115	11	TNT	Neutral	EEG O	EEG P	EEG C	2:41:37	2:41:42	1-1	97	N
116	11	TNT	Neutral	EEG O	EEG P	EEG C	2:45:36	2:45:51	1-1	97	N
117	11	TNT	Neutral	EEG O	EEG P	EEG C	2:46:10	2:46:15	1-2	97	T
118	11	TNT	Neutral	EEG O	EEG P	EEG C	2:46:45	2:46:50	1-2	97	T
119	11	TNT	Neutral	EEG O	EEG P	EEG C	2:47:18	2:47:23	1-2	97	T
120	11	TNT	Neutral	EEG O	EEG P	EEG C	2:48:11	2:48:16	1-2	97	T

TAPE # 5A

File #	# of Rec.	DIGITAL INFORMATION: CONTENTS IN-CHANNEL 1	2	3	4	5	ANALOG INFORMATION: TIME CODE START	MAKER	Rec Ses #	Rat. #	
121	11	TNT	Neutral	EEG O	EEG P	EEG C	2:48:47	2:48:52	1-2	97	N
122	11	TNT	Neutral	EEG O	EEG P	EEG C	2:53:32	2:53:37	1-3	97	N
123	11	TNT	Neutral	EEG O	EEG P	EEG C	2:54:25	2:54:30	1-3	97	T
124	11	TNT	Neutral	EEG O	EEG P	EEG C	2:54:55	2:55:00	1-3	97	T
125	11	TNT	Neutral	EEG O	EEG P	EEG C	2:55:32	2:55:37	1-3	97	N
126	11	TNT	Neutral	EEG O	EEG P	EEG C	2:56:02	2:56:07	1-3	97	T
127	11	TNT	Neutral	EEG O	EEG P	EEG C	2:56:31	2:56:36	1-3	97	N
128	11	TNT	Neutral	EEG O	EEG P	EEG C	3:26:33	3:26:38	3-1	G	T
129	11	TNT	Neutral	EEG O	EEG P	EEG C	3:28:16	3:28:21	3-1	G	T
130	11	TNT	Neutral	EEG O	EEG P	EEG C	3:29:55	3:30:00	3-1	G	N
131	11	TNT	Neutral	EEG O	EEG P	EEG C	3:30:21	3:30:26	3-1	G	T
132	11	TNT	Neutral	EEG O	EEG P	EEG C	3:30:53	3:30:58	3-1	G	N
133	11	TNT	Neutral	EEG O	EEG P	EEG C	3:35:20	3:35:25	3-2	G	N
134	11	TNT	Neutral	EEG O	EEG P	EEG C	3:35:38	3:35:43	3-2	G	N
135	11	TNT	Neutral	EEG O	EEG P	EEG C	3:36:10	3:36:15	3-2	G	T
136	11	TNT	Neutral	EEG O	EEG P	EEG C	3:36:37	3:36:42	3-2	G	T
137	11	TNT	Neutral	EEG O	EEG P	EEG C	3:37:14	3:37:19	3-2	G	N
138	11	TNT	Neutral	EEG O	EEG P	EEG C	3:37:45	3:37:50	3-2	G	T
139	11	TNT	Neutral	EEG O	EEG P	EEG C	3:39:15	3:39:20	3-3	G	N
140	11	TNT	Neutral	EEG O	EEG P	EEG C	3:39:44	3:39:49	3-3	G	T
141	11	TNT	Neutral	EEG O	EEG P	EEG C	3:40:06	3:40:11	3-3	G	N
142	11	TNT	Neutral	EEG O	EEG P	EEG C	3:40:15	3:40:20	3-3	G	T
143	11	TNT	Neutral	EEG O	EEG P	EEG C	3:40:54	3:40:59	3-3	G	N
144	11	TNT	Neutral	EEG O	EEG P	EEG C	3:41:15	3:41:20	3-3	G	T
145	11	TNT	Neutral	EEG O	EEG P	EEG C	3:42:25	3:42:30	3-3	G	N
146	11	TNT	Neutral	EEG O	EEG P	EEG C	3:42:45	3:42:50	3-4	G	T
147	11	TNT	Neutral	EEG O	EEG P	EEG C	3:43:15	3:43:20	3-4	G	N
148	11	TNT	Neutral	EEG O	EEG P	EEG C	3:43:33	3:43:38	3-4	G	T
149	11	TNT	Neutral	EEG O	EEG P	EEG C	3:44:15	3:44:20	3-4	G	N
150	11	TNT	Neutral	EEG O	EEG P	EEG C	3:44:35	3:44:40	3-4	G	T

TAPE # 5A

File #	# of Rec.	DIGITAL INFORMATION CONTENTS IN-CHANNEL 1	2	3	4	5	ANALOG INFORMATION TIME CODE START	MAKER	Rec Ses #	Rat.	
151	11	TNT	Neutral	EEG O	EEG P	EEG C	3:45:47	3:45:52	3-5	G	T
152	11	TNT	Neutral	EEG O	EEG P	EEG C	3:46:07	3:46:12	3-5	G	T
153	11	TNT	Neutral	EEG O	EEG P	EEG C	3:46:48	3:46:53	3-5	G	N
154	11	TNT	Neutral	EEG O	EEG P	EEG C	3:47:15	3:47:20	3-5	G	N
155	11	TNT	Neutral	EEG O	EEG P	EEG C	3:47:30	3:47:35	3-5	G	T
156	11	TNT	Neutral	EEG O	EEG P	EEG C	3:47:54	3:47:59	3-5	G	T
157	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:31:41	4:31:46	4-1	G	T
158	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:32:15	4:32:20	4-1	G	N
159	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:32:46	4:32:51	4-1	G	N
160	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:33:17	4:33:22	4-1	G	T
161	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:33:45	4:33:50	4-1	G	T
162	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:34:09	4:34:14	4-1	G	N
163	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:35:48	4:35:53	4-2	G	N
164	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:36:18	4:36:23	4-2	G	T
165	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:36:50	4:36:55	4-2	G	N
166	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:37:20	4:37:25	4-2	G	T
167	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:37:43	4:37:48	4-2	G	T
168	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:38:06	4:38:11	4-2	G	N
169	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:40:22	4:40:27	4-3	G	T
170	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:40:45	4:40:50	4-3	G	T
171	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:41:15	4:41:20	4-3	G	N
172	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:41:35	4:41:40	4-3	G	N
173	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:41:57	4:42:02	4-3	G	T
174	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:42:29	4:42:34	4-3	G	N
175	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:46:25	4:46:30	4-4	G	N
176	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:47:07	4:47:12	4-4	G	T
177	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:47:49	4:47:54	4-4	G	N
178	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:48:31	4:48:36	4-4	G	T
179	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:49:09	4:49:14	4-4	G	N
180	11	TNT	Neutral	EEG PC	EEG CO	EKG	4:49:48	4:49:53	4-4	G	T

TAPE # 6A

File #	# of Rec.	DIGITAL INFORMATION: CONTENTS IN CHANNEL 1	2	3	4	5	ANALOG INFORMATION: TIME CODE START	MAKER	Rec Ses	Rat. #	
1	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:26:50	-------	BASELINE		
2	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:31:56	00:32:01	2-1	97	T
3	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:32:48	00:32:53	2-1	97	N
4	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:33:20	00:33:25	2-1	97	T
5	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:34:02	00:34:07	2-1	97	N
6	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:34:39	00:34:44	2-1	97	T
7	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:35:18	00:35:23	2-1	97	N
8	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:37:49	00:37:54	2-2	97	T
9	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:38:09	00:38:14	2-2	97	N
10	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:38:41	00:38:46	2-2	97	T
11	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:39:15	00:39:20	2-2	97	N
12	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:39:47	00:39:52	2-2	97	T
13	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:40:32	00:40:37	2-2	97	N
14	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:42:19	00:42:24	2-3	97	T
15	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:42:54	00:42:59	2-3	97	T
16	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:43:26	00:43:31	2-3	97	N
17	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:44:15	00:44:20	2-3	97	T
18	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:44:57	00:45:02	2-3	97	n
19	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	00:45:37	00:45:42	2-3	97	T
20	11	TNT	Neutral	EEG PO	EEG PC	EEG CO	1:06:34	1:06:39	1-pre	100	T
21	11	TNT	Neutral	EEG P	EEG O	EEG C	1:07:05	1:07:12	1-pre	100	N
22	11	TNT	Neutral	EEG P	EEG O	EEG C	1:07:41	1:07:46	1-pre	100	T
23	11	TNT	Neutral	EEG P	EEG O	EEG C	1:09:41	1:09:46	1-pre	100	N
24	11	TNT	Neutral	EEG P	EEG O	EEG C	1:10:27	1:10:32	1-pre	100	T
25	11	TNT	Neutral	EEG P	EEG O	EEG C	1:11:21	1:11:26	1-pre	100	T
26	11	TNT	Neutral	EEG P	EEG O	EEG C	1:11:55	1:12:00	1-pre	100	N
27	11	TNT	Neutral	EEG P	EEG O	EEG C	1:12:15	1:12:20	1-pre	100	T
28	11	TNT	Neutral	EEG P	EEG O	EEG C	1:12:30	1:12:35	1-pre	100	N
29	11	TNT	Neutral	EEG P	EEG O	EEG C	1:12:47	1:12:52	1-pre	100	T
30	11	TNT	Neutral	EEG P	EEG O	EEG C	1:13:03	1:13:08	1-pre	100	N

TAPE # 6A

File #	# of Rec.	DIGITAL INFORMATION: CONTENTS IN CHANNEL 1	2	3	4	5	ANALOG INFORMATION: TIME CODE START	MAKER	Rec Ses	Rat. #	
31	11	TNT	Neutral	EEG P	EEG O	EEG C	1:13:36	1:13:41	1-p	re100	T
32	11	TNT	Neutral	EEG p	EEG O	EEG C	1:13:54	1:13:59	1-p	re100	N
33	11	TNT	Neutral	EEG p	EEG O	EEG C	1:14:11	1:14:16	1-p	re100	N
34	11	TNT	Neutral	EEG p	EEG O	EEG C	1:14:33	1:14:38	1-p	re100	T
35	11	TNT	Neutral	EEG p	EEG O	EEG C	1:15:03	1:15:08	1-p	re100	T
36	11	TNT	Neutral	EEG p	EEG O	EEG C	1:15:31	1:15:36	1-p	re100	N
37	11	TNT	Neutral	EEG p	EEG O	EEG C	1:16:32	1:16:37	1-p	re100	T
38	11	TNT	Neutral	EEG p	EEG O	EEG C	1:16:49	1:16:54	1-p	re100	T
39	11	TNT	Neutral	EEG p	EEG O	EEG C	1:17:16	1:17:21	1-p	re100	N
40	11	TNT	Neutral	EEG p	EEG O	EEG C	1:17:41	1:17:46	1-p	re100	T
41	11	TNT	Neutral	EEG p	EEG O	EEG C	1:18:07	1:18:12	1-p	re100	N
42	11	TNT	Neutral	EEG p	EEG O	EEG C	1:18:27	1:18;32	1-p	re100	T
43	11	TNT	Neutral	EEG p	EEG O	EEG C	1:19:05	1:19:10	1-p	re100	N
44	11	TNT	Neutral	EEG p	EEG O	EEG C	1:19:27	1:19:32	1-p	re100	T
45	11	TNT	Neutral	EEG p	EEG O	EEG C	1:19:50	1:19:55	1-p	re100	N
46	11	TNT	Neutral	EEG p	EEG O	EEG C	1:20:23	1:20:28	1-p	re100	T
47	11	TNT	Neutral	EEG p	EEG O	EEG C	1:20:50	1:20:55	1-p	re100	N
48	11	TNT	Neutral	EEG p	EEG O	EEG C	1:22:25	1:22:30	1-1	100	T
49	11	TNT	Neutral	EEG p	EEG O	EEG C	1:23:06	1:23:11	1-1	100	N
50	11	TNT	Neutral	EEG p	EEG O	eeg c	1:23:27	1:23:32	1-1	100	N
51	11	TNT	Neutral	EEG p	EEG O	EEG c	1:23:51	1:23:56	1-1	100	N
52	11	TNT	Neutral	EEG p	EEG O	EEg C	1:24:11	1:24:16	1-1	100	T
53	11	TNT	Neutral	EEG p	EEG O	EEG C	1:24:39	1:24:44	1-1	100	T
54	11	TNT	Neutral	EEG p	EEG O	EEG C	1:26:11	1:26:16	1-2	100	T
55	11	TNT	Neutral	EEG p	EEG O	EEG C	1:26:41	1:26:46	1-3	100	N
56	11	TNT	Neutral	EEG p	EEG O	EEG C	1:27:16	1:27:21	1-3	100	T
57	11	TNT	Neutral	EEG p	EEG O	EEG C	1:27:37	1:27:42	1-2	100	T
58	11	TNT	Neutral	EEG p	EEG O	EEG C	1:28:07	1:28:12	1-2	100	T
59	11	TNT	Neutral	EEG p	EEG O	EEG C	1:28:41	1:28:46	1-2	100	N
60	11	TNT	Neutral	EEG p	EEG O	EEG C	1:30:04	1:30:09	1-3	100	N

TAPE # 6A

File #	# of Rec.	DIGITAL INFORMATION CONTENTS IN CHANNEL 1	2	3	4	5	ANALOG INFORMATION TIME CODE START	MAKER	Rec Ses	Rat. #	
61	11	TNT	Neutral	EEG P	EEG O	EEG C	1:30:49	1:30:54	1-3	100	T
62	11	TNT	Neutral	EEG P	EEG O	EEG C	1:31:46	1:31:51	1-3	100	N
63	11	TNT	Neutral	EEG P	EEG O	EEG C	1:32:16	1:32:21	1-3	100	N
64	11	TNT	Neutral	EEG P	EEG O	EEG C	1:32:45	1:32:50	1-3	100	T
65	11	TNT	Neutral	EEG P	EEG O	EEG C	1:33:16	1:33:21	1-3	100	T
66	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:10:01	2:10:06	2-1	100	T
67	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:10:33	2:10:38	2-1	100	T
68	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:11:06	2:11:11	2-1	100	N
69	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:11:39	2:11:44	2-1	100	N
70	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:12:07	2:12:12	2-1	100	T
71	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:12:34	2:12:39	2-1	100	N
72	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:13:53	2:13:58	2-2	100	T
73	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:14:25	2:14:30	2-2	100	N
74	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:14:58	2:15:03	2-2	100	T
75	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:15:30	2:15:35	2-2	100	N
76	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:16:19	2:16:24	2-2	100	T
77	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:16:57	2:17:02	2-2	100	N
78	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:18:08	2:18:13	2-3	100	T
79	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:18:46	2:18:51	2-3	100	N
80	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:19:28	2:19:33	2-3	100	T
81	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:19:42	2:19:47	2-3	100	T
82	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:20:34	2:20:39	2-3	100	N
83	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:21:02	2:21:07	2-3	100	N
84	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:23:03	2:23:08	2-4	100	T
85	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:23:42	2:23:47	2-4	100	N
86	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:24:13	2:24:18	2-4	100	T
87	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:24:47	2:24:52	2-4	100	T
88	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:25:25	2:25:30	2-4	100	N
89	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:26:06	2:26:11	2-4	100	T
90	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:28:55	2:29:00	2-5	100	T

TAPE # 6A

DIGITAL INFORMATION							ANALOG INFORMATION			
File #	# of Rec.	CONTENTS IN-CHANNEL 1	2	3	4	5	TIME CODE START	MAKER	Rec Ses	Rat. #
91	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:29:20	2:29:25	2-5	100 N
92	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:29:45	2:29:50	2-5	100 N
93	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:30:07	2:30:12	2-5	100 T
94	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:30:36	2:30:41	2-5	100 N
95	11	TNT	Neutral	EEG PC	EEG CO	EEG PC	2:31:03	2:31:08	2-5	100 T
96	11	TNT	Neutral	EEG O	EEG C	EEG P	3:08:36	3:08:41	3-1	97 T
97	11	TNT	Neutral	EEG O	EEG C	EEG P	3:09:34	3:09:39	3-1	97 N
98	11	TNT	Neutral	EEG O	EEG C	EEG P	3:10:15	3:10:20	3-1	97 T
99	11	TNT	Neutral	EEG O	EEG C	EEG P	3:10:48	3:10:53	3-1	97 N
100	11	TNT	Neutral	EEG O	EEG C	EEG P	3:11:19	3:11:24	3-1	97 T
101	11	TNT	Neutral	EEG O	EEG C	EEG P	3:11:57	3:12:02	3-1	97 T
102	11	TNT	Neutral	EEG O	EEG C	EEG P	3:14:24	3:14:29	3-2	97 T
103	11	TNT	Neutral	EEG O	EEG C	EEG P	3:14:46	3:14:51	3-2	97 T
104	11	TNT	Neutral	EEG O	EEG C	EEG P	3:15:12	3:15:17	3-2	97 N
105	11	TNT	Neutral	EEG O	EEG C	EEG P	3:15:36	3:15:41	3-2	97 N
106	11	TNT	Neutral	EEG O	EEG C	EEG P	3:16:06	3:16:11	3-2	97 T
107	11	TNT	Neutral	EEG O	EEG C	EEG P	3:16:46	3:16:51	3-2	97 N
108	11	TNT	Neutral	EEG O	EEG C	EEG P	3:19:24	3:19:29	3-3	97 N
109	11	TNT	Neutral	EEG O	EEG C	EEG P	3:19:51	3:19:56	3-3	97 N
110	11	TNT	Neutral	EEG O	EEG C	EEG P	3:20:26	3:20:31	3-3	97 T
111	11	TNT	Neutral	EEG O	EEG C	EEG P	3:20:42	3:20:47	3-3	97 T
112	11	TNT	Neutral	EEG O	EEG C	EEG P	3:21:07	3:21:12	3-3	97 N
113	11	TNT	Neutral	EEG O	EEG C	EEG P	3:21:31	3:21:36	3-3	97 T
114	11	TNT	Neutral	EEG O	EEG C	EEG P	3:53:40	3:53:45	1-pre	103 T
115	11	TNT	Neutral	EEG O	EEG C	EEG P	3:54:10	3:54:15	1-pre	103 N
116	11	TNT	Neutral	EEG O	EEG C	EEG P	3:54:36	3:54:41	1-pre	103 T
117	11	TNT	Neutral	EEG O	EEG C	EEG P	3:54:59	3:55:04	1-pre	103 T
118	11	TNT	Neutral	EEG O	EEG C	EEG P	3:55:33	3:55:38	1-pre	103 N
119	11	TNT	Neutral	EEG O	EEG C	EEG P	3:56:12	3:56:17	1-pre	103 T
120	11	TNT	Neutral	EEG O	EEG C	EEG P	3:56:36	3:56:41	1-pre	103 T

TAPE # 6A

File #	# of Rec.	DIGITAL INFORMATION: CONTENTS IN-CHANNEL 1	2	3	4	5	ANALOG INFORMATION: TIME CODE START	MAKER	Rec Ses	Rat. #	
121	11	TNT	Neutral	EEG O	EEG C	EEG P	3:57:03	3:57:08	1-pre	103	N
122	11	TNT	Neutral	EEG O	EEG C	EEG P	5:57:38	3:57:43	1-pre	103	T
123	11	TNT	Neutral	EEG O	EEG C	EEG P	3:58:33	3:58:38	1-pre	103	T
124	11	TNT	Neutral	EEG O	EEG C	EEG P	3:59:03	3:59:08	1-pre	103	N
125	11	TNT	Neutral	EEG O	EEG C	EEG P	3:59:41	3:59:46	1-pre	103	T
126	11	TNT	Neutral	EEG O	EEG C	EEG P	3:59:59	4:00:04	1-pre	103	T
127	11	TNT	Neutral	EEG O	EEG C	EEG P	4:00:13	4:00:18	1-pre	103	N
128	11	TNT	Neutral	EEG O	EEG C	EEG P	4:00:40	4:00:45	1-pre	103	T
129	11	TNT	Neutral	EEG O	EEG C	EEG P	4:01:20	4:01:25	1-pre	103	N
130	11	TNT	Neutral	EEG O	EEG C	EEG P	4:01:54	4:01:59	1-pre	103	T
131	11	TNT	Neutral	EEG O	EEG C	EEG P	4:02:16	4:02:21	1-pre	103	N
132	11	TNT	Neutral	EEG O	EEG C	EEG P	4:02:42	4:02:47	1-pre	103	N
133	11	TNT	Neutral	EEG O	EEG C	EEG P	4:04:01	4:04:06	1-pre	103	T
134	11	TNT	Neutral	EEG O	EEG C	EEG P	4:04:22	4:04:27	1-pre	103	N
135	11	TNT	Neutral	EEG O	EEG C	EEG P	4:04:36	4:04:41	1-pre	103	N
136	11	TNT	Neutral	EEG O	EEG C	EEG P	4:05:02	4:05:07	1-pre	103	T
137	11	TNT	Neutral	EEG O	EEG C	EEG P	4:05:22	4:05:27	1-pre	103	T
138	11	TNT	Neutral	EEG O	EEG C	EEG P	4:05:41	4:05:46	1-pre	103	T
139	11	TNT	Neutral	EEG O	EEG C	EEG P	4:06:01	4:06:06	1-pre	103	N
140	11	TNT	Neutral	EEG O	EEG C	EEG P	4:06:34	4:06:39	1-pre	103	T
141	11	TNT	Neutral	EEG O	EEG C	EEG P	4:07:13	4:07:18	1-pre	103	N
142	11	TNT	Neutral	EEG O	EEG C	EEG P	4:07:40	4:07:45	1-pre	103	T
143	11	TNT	Neutral	EEG O	EEG C	EEG P	4:10:31	4:10:36	1-1	103	T
144	11	TNT	Neutral	EEG O	EEG C	EEG P	4:10:51	4:10:56	1-1	103	T
145	11	TNT	Neutral	EEG O	EEG C	EEG P	4:11:25	4:11:30	1-1	103	N
146	11	TNT	Neutral	EEG O	EEG C	EEG P	4:11:41	4:11:46	1-1	103	N
147	11	TNT	Neutral	EEG O	EEG C	EEG P	4:12:03	4:12:08	1-1	103	T
148	11	TNT	Neutral	EEG O	EEG C	EEG P	4:12:26	4:12:31	1-1	103	N
149	11	TNT	Neutral	EEG O	EEG C	EEG P	4:13:59	4:14:04	1-2	103	T
150	11	TNT	Neutral	EEG O	EEG C	EEG P	4:14:29	4:14:34	1-2	103	N

TAPE # 6A

File #	# of Rec.	DIGITAL INFORMATION: CONTENTS IN-CHANNEL 1	2	3	4	5	ANALOG INFORMATION: TIME CODE START	MAKER	Rec Ses	Rat. #	
151	11	TNT	Neutral	EEG O	EEG C	EEG P	4:14:55	4:15:00	1-2	103	T
152	11	TNT	Neutral	EEG O	EEG C	EEG P	4:15:17	4:15:22	1-2	103	N
153	11	TNT	Neutral	EEG O	EEG C	EEG P	4:15:43	4:15:48	1-2	103	T
154	11	TNT	Neutral	EEG O	EEG C	EEG P	4:16:12	4:16:17	1-2	103	N
155	11	TNT	Neutral	EEG O	EEG C	EEG P	4:17:47	4:17:52	1-3	103	N
156	11	TNT	Neutral	EEG O	EEG C	EEG P	4:18:15	4:18:20	1-3	103	N
157	11	TNT	Neutral	EEG O	EEG C	EEG P	4:19:02	4:19:07	1-3	103	T
158	11	TNT	Neutral	EEG O	EEG C	EEG P	4:19:41	4:19:46	1-3	103	N
159	11	TNT	Neutral	EEG O	EEG C	EEG P	4:20:00	4:20:05	1-3	103	T
160	11	TNT	Neutral	EEG O	EEG C	EEG P	4:20:34	4:20:39	1-3	103	T
161	11	TNT	Neutral	EEG O	EEG C	EEG P	4:23:15	4:23:20	1-4	103	N
162	11	TNT	Neutral	EEG O	EEG C	EEG P	4:23:46	4:23:51	1-4	103	N
163	11	TNT	Neutral	EEG O	EEG C	EEG P	4:24:39	4:24:44	1-4	103	T
164	11	TNT	Neutral	EEG O	EEG C	EEG P	4:25:19	4:25:24	1-4	103	T
165	11	TNT	Neutral	EEG O	EEG C	EEG P	4:25:57	4:26:02	1-4	103	N
166	11	TNT	Neutral	EEG O	EEG C	EEG P	4:26:35	4:26:40	1-4	103	T
167	11	TNT	Neutral	EEG O	EEG C	EEG P	4:27:48	4:27:53	1-5	103	N
168	11	TNT	Neutral	EEG O	EEG C	EEG P	4:28:15	4:28:20	1-5	103	N
169	11	TNT	Neutral	EEG O	EEG C	EEG P	4:28:42	4:28:47	1-5	103	T
170	11	TNT	Neutral	EEG O	EEG C	EEG P	4:29:03	4:29:08	1-5	103	T
171	11	TNT	Neutral	EEG O	EEG C	EEG P	4:29:18	4:29:23	1-5	103	N
172	11	TNT	Neutral	EEG O	EEG C	EEG P	4:29:55	4:30:00	1-5	103	T

TASK IV objectives were to:

1. Supply sufficient documentation detailing procedures needed for data extraction from the digital tapes. This information pertains to tape formatting and unpacking procedures, that are required, and have to be followed for magnetic tape dumps, processing and so on.

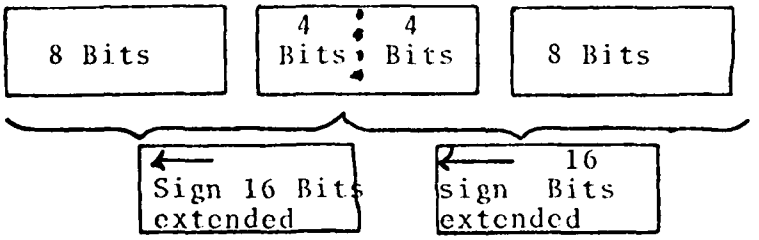
The following steps are needed to unpack and de-multiplex the 12-bit data into a 16-bit word data for ease of handling.

1) Get runtime parameters:
   a) Number of channels recorded =NCH
   b) Number of data valves per channel =NWDCH

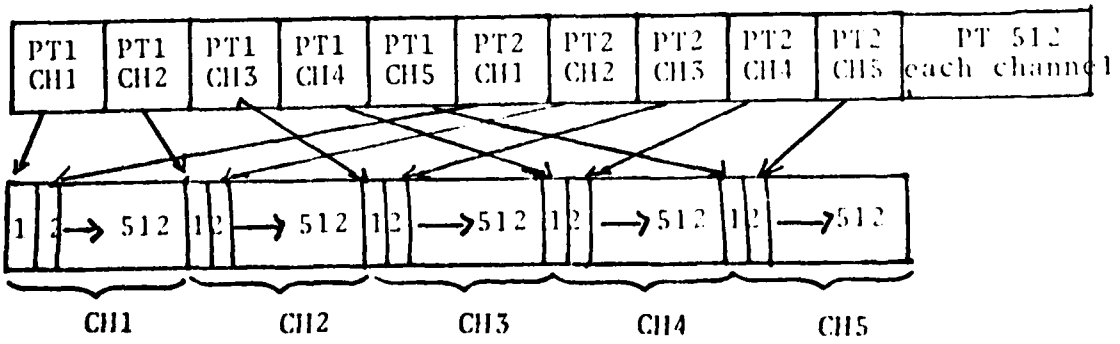
2) Calculate number of bytes per input record according to runtime parameters.
   a) NBUT = (NCH * NWDCH) *3/2

3) Unpack and de-multiplex each record in accordance to these formats:

Unpack:



De-multiplex:



```
0001            PROGRAM UNPACK
                C
                C               GENERATE TAPE FILE OF DATA COLLECTED BY THE DIGI-DATA
                C               RECORDER FOR SANDIA AND SENSOR ARRAY PROJECTS.
                C
0002            LOGICAL*1 BYTEA(2),ISB
0003            INTEGER OFILE,IARY(4096),JARY(4096),ISTAT(2)
0004            INTEGER IN(256,8),OUT(256,8)
0005            EQUIVALENCE (JARY(1),BYTEA(1)),(ISTAT(1),ISB)
0006            EQUIVALENCE (JARY(1),IN(1,1))
0007            DATA LUNO/11/,LUNI/10/,MAXNB/8192/
                C
                C               GET RUNTIME PARAMETERS
                C
0008            ACCEPT 100,NCH,NWDCH,MODE,NRTD,IFILE,NSKP,LFILE,OFILE
0009    100     FORMAT(8I5)
0010            IFIL=IFILE
0011            PRINT 101,NCH,NWDCH,MODE,IFILE,NSKP
0012    101     FORMAT(T40,'DIGI-DATA UNPACKER',//
               &T10,'# OF CHANNELS RECORDED',T50,I5,/,
               &T10,'# OF SAMPLE POINTS/CHANNEL',T50,I5,/,
               &T10,'DIGI-DATA TAPE FORMAT',T50,I5,/,
               &T10,'START INPUT TAPE FILE',T50,I5,/,
               &T10,'# OF INPUT RECORDS SKIPPED',T50,I5)
0013            PRINT 105,LFILE,NRTD,OFILE
0014    105     FORMAT(T10,'END INPUT TAPE FILE',T50,I5,/,
               &T10,'# RECORDS PER FILE TO PROCESS',T50,I5,/,
               &T10,'START OUTPUT TAPE FILE',T50,I5)
                C
                C               DETERMINE # OF BYTES (FRAMES) PER INPUT RECORD
                C
0015            NB=NCH*NWDCH
0016            NDATA=NB
0017            NDB=NWDCH*2
0018            IF(MODE.EQ.2)NB=NB*3/2
0019            PRINT 102,NB,NWDCH,NDB
0020    102     FORMAT(T10,'# OF BYTES (FRAMES) PER INPUT RECORD',T50,I5,/,
               &T10,'# OF DATA VALUES PER OUTPUT RECORD',T50,I5,/,
               &T10,'# OF BYTES PER OUTPUT RECORD',T50,I5)
0021            IF(NB.LE.MAXNB)GO TO 5
                C
                C               DATA RECORDS TOO LARGE
                C
0022            PRINT 103,MAXNB
0023    103     FORMAT(' EXCEEDED ARRAY SIZE OF',I5,'  BYTES')
0024            STOP
                C
                C               INITIAL TAPE POSITION
                C
0025    5       CALL MTRWND(LUNI,ISW,ISTAT)
0026            CALL MTRWND(LUNO,ISW,ISTAT)
                C
                C               SKIP HEADER RECORD FOR THIS FILE
                C
0027            CALL MTSPFL(LUNI,IFILE-1,ISW,ISTAT)
0028            IF(ISB.LT.0)GO TO 90
```

```
0029            CALL MTSKPF(LUNO,OFILE-1,ISW,ISTAT)
0030            IF(ISB.LT.0)GO TO 90
                C
                C               HOW MANY INPUT RECORDS TO SKIP
                C
0031            CALL MTSKPR(LUNI,NSKP,ISW,ISTAT)
                C
                C               GET DATA RECORD
                C
0032            IR=0
0033    12      CONTINUE
0034            JX=1
0035            CALL MTREAD(LUNI,BYTEA,NB,ISW,ISTAT)
0036            IF(ISB.EQ.-10)GO TO 30
0037            IF(ISB.EQ.-11)GO TO 30
0038            IF(ISB.LT.0)GO TO 91
                C
                C               UNPACK DIGI-DATA FORMAT
                C
0039    10      CALL UNPKDD(BYTEA,NB,IARY,MODE)
                C
                C               DE-MULTIPLEX
                C
0040            CALL DMUXDD(IARY,JARY,NCH,NWDCH)
                C
                C               OUTPUT TO TAPE
                C
0041            DO 33 IC=1,NDATA,NWDCH
0042            CALL MTWRIT(LUNO,JARY(IC),NDB,ISW,ISTAT)
0043            IF(ISB.LT.0)GO TO 92
0044    33      CONTINUE
                C
                C               CHECK FOR # RECORDS/FILE
                C
0045    19      IR=IR+1
0046            IF(IR.LT.NRTD)GO TO 12
0047            CALL MTSKPF(LUNI,1,ISW,ISTAT)
                C
                C               END OF DATA THIS FILE
                C
0048    30      PRINT 106,IR
0049    106     FORMAT(T10,'TOTAL RECORDS TO TAPE',T50,I5)
0050            CALL MTWEOF(LUNO,ISW,ISTAT)
0051            IFIL=IFIL+1
0052            IR = 0
0053            IF(IFIL.LE.LFILE)GO TO 12
0054            CALL MTWEOF(LUNO,ISW,ISTAT)
0055            CALL MTRWND(LUNI,ISW,ISTAT)
0056            CALL MTRWND(LUNO,ISW,ISTAT)
0057            STOP
                C
                C               ERROR HANDLERS
                C
0058    90      PRINT 900,ISB
0059    900     FORMAT(' TAPE ERROR ON HEADER READ',I5)
0060            STOP
```

```
0061     91       PRINT 910,ISB,IR
0062     910      FORMAT(' TAPE ERROR ON DATA READ',I5,10X,'RECORD',I5)
0063              GO TO 18
0064     92       PRINT 920,ISB,IR
0065     920      FORMAT(' TAPE ERROR ON DATA WRITE',I5,10X,'RECORD',I5)
0066              GO TO 19
         C
0067              END
```

PROGRAM SECTIONS

NUMBER	NAME	SIZE		ATTRIBUTES
1	$CODE1	001416	391	RW,I,CON,LCL
2	$PDATA	000004	2	RW,D,CON,LCL
3	$IDATA	001272	349	RW,D,CON,LCL
4	$VARS	050052	10261	RW,D,CON,LCL
5	$TEMPS	000002	1	RW,D,CON,LCL

VARIABLES

NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRESS	NAME	TYPE	ADDRE
IC	I*2	4-050050	IFIL	I*2	4-050038	IFILE	I*2	4-050024	IR	I*2	4-050044	ISB	L*1	4-050
ISW	I*2	4-050042	JX	I*2	4-050046	LFILE	I*2	4-050030	LUNI	I*2	4-050010	LUNO	I*2	4-050
MAXNB	I*2	4-050012	MODE	I*2	4-050020	NB	I*2	4-050034	NCH	I*2	4-050014	NDATA	I*2	4-050
NDB	I*2	4-050040	NRTD	I*2	4-050022	NSKP	I*2	4-050026	NWDCH	I*2	4-050016	OFILE	I*2	4-050

ARRAYS

NAME	TYPE	ADDRESS	SIZE		DIMENSIONS
BYTEA	L*1	4-000000	000002	1	(2)
IARY	I*2	4-020006	020000	4096	(4096)
IN	I*2	4-000000	010000	2048	(256,8)
ISTAT	I*2	4-040006	000004	2	(2)
JARY	I*2	4-000000	020000	4096	(4096)
OUT	I*2	4-040006	010000	2048	(256,8)

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
5	1-000512	12	1-000654	18	1-000726	19	1-001062	30	1-001114
33	**	90	1-001236	91	1-001300	92	1-001350	100'	3-000000
101'	3-000004	102'	3-000440	103'	3-000636	105'	3-000276	106'	3-000704
900'	3-000742	910'	3-001002	920'	3-001054				

FUNCTIONS AND SUBROUTINES REFERENCED

DMUXDD MTREAD MTRWND MTSKPF MTSKPR MTWEOF MTWRIT UNPADD

TOTAL SPACE ALLOCATED = 052770 11004

NO FPP INSTRUCTIONS GENERATED

SY0:[234,222]UNPACK,SY0:[234,222]UNPACK/-SP=SY0:[234,222]UNPACK